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A STUDY OF THE EFFECTS OF COMMUNITY AND INSTITUTIONAL SCHOOL CLASSES FOR TRAINABLE MENTALLY RETARDED CHILDREN.

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THE MAJOR HYPOTHESIS OF THIS PROJECT WAS THAT TRAINABLE MENTALLY RETARDED CHILDREN ATTENDING SCHOOL PROGRAMS, WHETHER LIVING AT HOME OR IN AN INSTITUTION, WOULD SHOW GREATER INCREMENTS OF SOCIAL COMPETENCE OVER A PERIOD OF TIME THAN COMPARABLE CHILDREN NOT ATTENDING SUCH PROGRAMS. IT WAS ALSO SUGGESTED THAT PARENTS OF RETARDATES WHO ATTEND PUBLIC SCHOOL CLASSES IN THEIR COMMUNITIES WOULD SHOW GREATER INCREMENTS OF ADAPTABILITY THAN THOSE WHOSE CHILDREN DO NOT ATTEND SUCH CLASSES. FROM ABOUT 180 CHILDREN, 4 GROUPS WERE FORMED--(1) COMMUNITY CONTROL, (2) COMMUNITY EXPERIMENTAL, (3) INSTITUTIONAL CONTROL, AND (4) INSTITUTIONAL EXPERIMENTAL. THE EXPERIMENTAL GROUPS ATTENDED PUBLIC SCHOOL CLASSES FOR TRAINABLE CHILDREN WHILE THE CONTROL GROUPS DID NOT. RATINGS ON THE CRITERION MEASURES WERE OBTAINED AT THE INITIATION AND CONCLUSION OF THE 2-YEAR EXPERIMENTAL PERIOD. PARENTS OF THE COMMUNITY GROUPS WERE VISITED AND INTERVIEWED FOUR TIMES DURING THE PROJECT PERIOD. ANALYSIS OF FINDINGS SHOWED SIGNIFICANT INCREASES IN THE SOCIAL COMPETENCY DEVELOPMENT FOR THE COMMUNITY GROUPS AND COMPARABLE DECREASES FOR THE SAME IN THE INSTITUTIONAL GROUPS. DEVELOPMENTAL DIFFERENCES BETWEEN THE SCHOOL AND NONSCHOOL CHILDREN, WHETHER LIVING AT HOME OR NOT, WERE INSIGNIFICANT. IT WAS THEREFORE CONCLUDED THAT SCHOOL PROGRAMS FOR TRAINABLE MENTAL RETARDATES WERE INADEQUATE IN FOSTERING SOCIAL COMPETENCY DEVELOPMENT. ALSO, THE ENVIRONMENT OF A HOME APPEARED TO BE MUCH MORE STIMULATING FOR THIS SOCIAL DEVELOPMENT THAN THE INSTITUTIONAL ENVIRONMENT. PARENTAL ADAPTABILITY APPEARED NOT TO BENEFIT WHEN CHILDREN ATTENDED SCHOOL, POSSIBLY BECAUSE OF LACK OF PARENT-TEACHER CONTACTS AS WELL AS INADEQUACY OF THE FEW CONTACTS THAT OCCURRED. (JH)

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A STUDY OF THE EFFECTS OF COMMUNITY AND INSTITUTIONAL SCHOOL CLASSES FOR TRAINABLE MENTALLY RETARDED CHILDREN

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JUNE, 1961

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PREFACE

With the exception of a few early pioneering efforts, public school programs for trainable mentally retarded children are a phenomenon of the past decade. The public schools have assumed a difficult responsibility by extending their services to these children. The number of public school classes for trainable children has increased steadily. In California alone, the number of such classes has increased from 33 in 1952-53 to 246 in 1960-61 which represents an average increase of approximately 27 classes yearly. The enrollment during this nine-year period increased from 376 to 2 748 which represents an average annual increase of approximately 296 children. This has been accomplished in spite of the fact that legislation regarding the education of trainable children is permissive.

The increased enrollment of trainable children in public school programs during the past ten years is not indicative of the quality of these programs. It is recognized that much is yet to be learned about the educability of trainable mentally retarded children and empirical evidence on the effectiveness of school programs for such children is needed. This study is designed to determine the effect of educational programs as are presently in operation by a number of public school districts in California and by a state institution for the mentally retarded on the development of trainable mentally retarded children. Further, this study investigates the effects of school programs for trainable children on their parents.

The research staff is indebted to the many individuals and agencies for their cooperation in making this study possible. Primarily, we are grateful to the families for their participation during the two-year study period. The public school personnel, in particular the classroom teachers, were gracious in making available their resources, and for providing the staff with data upon which much of the school findings are based.

The agencies, both public and private, which contributed to the study were the California State Department of Education, the California State Department of Mental Hygiene, the California Council of Retarded Children and its affiliates, various California public school districts, the Oregon State Department of Education and the Portland, Oregon public schools. Many public and private schools and state institutions throughout the United States provided data which was necessary for the development of the research instruments utilized in this study.

Personnel of the United States Office of Education, faculty members of the Institute for Research on Exceptional Children, University of Illinois, and the George Peabody College for Teachers, Nashville, Tennessee were helpful in the initial planning of the research design and development of instruments. The faculty and staff of San Francisco State College contributed immeasurably both in the handling of the administrative aspects and by helping with the many methodological and substantive problems that arose during the course of the study.

There were two committees who served in an advisory capacity to the study. The following committee participated in the initial planning of the research: Dr. Francis P. Doyle, Dr. Lloyd Dunn, Dr. Raymond Graham, Dr. Samuel A. Kirk and Dr. Romaine P. Mackie. The members of the local advisory committee were: Miss Frances Caine, Mrs. Margarete Connolly, Miss Flora Daly, Mr. William Herbig, Mrs. Helen Herrick, Dr. Thomas Nelson and Dr. John Roberts. To all of these individuals we wish to express our appreciation.

A number of consultants were utilized for various substantive and statistical purposes. Particular credit is due to Dr. Norman Livson, University of California at Berkeley; Dr. Quinn McNemar, Dr. Paul Wallin, Dr. Bernard Cohen, Dr. Robert R. Sears and Dr. Frederick J. McDonald, all of Stanford University; and Dr. Phillip D. Deuel, University of British Columbia.

We wish to thank the many professional persons who participated in the collection and coding of the data. The following individuals played a major role in these aspects of the research: Mrs. Evelyn Apte, Robert Apte, Miss Virginia Burtt, William Cootes, Mrs. Kathrine Crymes, Dean Forbes, Michael J. Goldstein, Ralph LeRoux, Leonard McConnell, Mrs. Frances McFarland, Glenn D. McNeill, Walter Nunokawa, James Palmer, William Piehl, William Stuart, Paul Verden, Leslie Waldo, Mrs. Esther Whitman and Richard Wolton.

Donald Kase made substantial contributions to the research design and to the development of the San Francisco Social Competency Scale.

Paul Thormahlen, of the California State Department of Mental Hygiene, was instrumental in obtaining the institutional sample as well as facilitating the collection of data within the institutional setting. We are also indebted to him for his critical reading of portions of this manuscript.

The counsel of Miss Flora Daly, of the California State Department of Education, was sought frequently, and her contributions to this study as well as her expert criticism during the writing of this report are gratefully acknowledged.

The secretarial duties during the study were expertly performed by Miss Freda Higley and Mrs. Alice Brosch. Their perseverance and patience was a great comfort to the staff.

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CHAPTER ONE

INTRODUCTION

I. BACKGROUND OF THE STUDY

Education is more than a system whereby certain skills and information are transmitted; it is a value. The desirability of being "educated" in a democratic society is assumed. The assumption that education is valuable is so pervasive in American society that many times individuals are evaluated solely on the number of years they attended school or degrees obtained. When graduates of our schools seem to be lacking in competence, we do not question the value of education as such but, rather, what is emphasized within the school curriculum.

Going to school is probably the most commonly shared cultural experience engaged in outside of the family. The entrance of a child into school at about age six is not only a natural but an exciting thing to which parents and children look forward with great anticipation. The expectation for a child to go to school is so great that if he is rejected it is a personal catastrophe for his family. The idea of an "equal opportunity" to go to school is so generally accepted that rejection from school is psychologically damaging to the family. To most people, the school is seen as the agency through which the child will learn the specific skills necessary to maintain the core values of society. In our society these values are independence, leadership, raising a family and in general being a "good citizen." The individual who cannot learn these skills, or who behaves quite differently from others is devaluated. This devaluation is experienced not only by the child but by the family as well. Children with intellectual, emotional and/or physical deviations are frequently perceived as not being able to maintain the core values and are, as a consequence, devaluated. For many children with such deviations school programs exist, thus permitting the child an opportunity to develop his abilities and reduce the difference between him and other members of society. However, for many trainable mentally retarded children[1] this opportunity is not available.

The hesitancy on the part of the schools to require educational programs for trainable retarded children may be the result of three basic considerations: 1) a general defensiveness among educators as to the adequacy of school programs for the "normal" child, 2) lack of information about the development of trainable children and how to design school programs to serve them best, and 3) divergent philosophical orientations regarding the definition and goals of education.

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[1] Trainable mentally retarded children are those children who are capable of achieving personal independence, social adjustment, and economic usefulness within their home situation or a sheltered environment but unable to benefit from a program designed to lead to complete independence, such as provided for educable mentally retarded children. In general, the intelligence quotients of children designated as trainable mentally retarded fall between 25 and 55. The criteria utilized by the public schools in California for the selection of such children are found in Chapter Two of this report.

Criticism of public education has been marked in the past decade. Many educators have become overly sensitive and defensive in regard to the adequacy of the job they are doing with children in general. In part, the unwillingness of general educators to assume the responsibility for the jurisdiction of the trainable child is due to their conception of these programs as placing the schools in an indefensible position. A special program in which basic academic skills are not stressed cannot, from their point of view, enhance the status of the schools. The value placed on intelligence and achievement in American society is great. So much so that educators who do initiate programs for these children rationalize their behavior on extra-educational grounds; that is, they may refer to parental pressure or moral responsibility. Few educators appear to have developed a rationale for the inclusion of trainable children in the school that is logically consistent with their general philosophy of education.

In contrast with regular school programs, there is a dearth of information on the development of trainable retarded children which can be utilized as a basis for school planning. The developmental expectations of "normal" children and the achievement areas in general education for them are relatively clear and do not present major problems in regard to evaluating pupil growth. The goals of general education and the ultimate criteria of success in terms of citizenship, leadership and social and economic contribution are seldom challenged. In contrast, the relevancy of the goals for the trainable child to the goals of general education have not been explicitly formulated. Consequently, reliable means of assessing the development of trainable children have been conspicuously lacking.

Divergent philosophical orientations in regard to the definition of education have been the major deterrent to the development of a consistent approach toward the place of trainable retarded children in the public schools. Two points of view are presented; the latter representing the orientation of the investigators.

Those educators who envision education as leading to complete independence of the individual and to his active participation in societal affairs are opposed to programs for trainable retarded children being placed under the direction of the public schools. Present knowledge supports the contention that these children will not be self-sufficient in the general sense of the term. These educators believe that the individual must have some minimal capacity in regard to generalizing, abstracting, problem solving, etc., as a prior condition for school inclusion. Further, it is stipulated that the only adequate measure of the effects of education is changes in the individual being measured. The ultimate criterion, from this point of view, is that the changes within the individual must lead to social contribution as a direct consequence of school enrollment. By definition, then, the trainable child would not meet the criteria set forth by these educators.

The second approach defines education as a systematic process through which positive behavioral changes are fostered consistent with the individual's abilities. These "positive behavioral changes" are not absolute but relative to prior knowledge of the individuals under consideration. This definition of education, then, is as broad as the requirements of society, regardless of the generality or specificity of the training required for any particular individual or group of individuals.

In order to measure the effectiveness of an educational program, there must be agreement on the goals of that program which, then, become the generalized criteria of success. The immediate or ultimate goals of education must be relevant to the specific group under consideration.

The writers view the goals of education, that is, independence, leadership, personal and occupational adjustment, as relative rather than absolute factors. Within the life situation of most individuals, regardless of how circumscribed, specific competencies can be developed. There is no guarantee that the efforts of the schools will be fruitful in every instance. What is important, however, is that we can stipulate for individuals with diverse abilities, educational experiences which will contribute to increased independence. Whether this independence is specific to the child's family, a state institution, or "society" in general, is irrelevant.

The criterion of independence will be utilized to indicate how educators of these differing philosophic inclinations would evaluate retarded children. If it is assumed that education must lead to complete independence, the contributions of a school program would be assessed in respect to increasing the child's independent behavior so that he does not deviate markedly from individuals of his age. We could, then, utilize psychological and developmental scales standardized on the general population of children. If, after a certain period of education, the child still differed significantly from his age group, we would conclude that either the program was unsuccessful or the child cannot profit from further school experience. The child may have increased his score on the measure of independence; however, based on his status after training, if he is not sufficiently like his peers, we would not predict independent behavior in the future.

Viewing independence in relative terms permits the establishment of goals based on some estimation of probable success for the group. The means of measuring growth should be sufficiently sensitive to differentiate within this group. The measure of the effect of training would be significant increments over a comparable group not being trained. The judgment as to how much improvement is adequate or acceptable, for a particular group, is relative to the specific goals of education for that group.

The assessment of the effects of school solely in terms of the children's competencies appears to be too restrictive a criterion for evaluating educational programs for trainable children. Another factor that should be considered is the effect of school on the family. School, for any child, has a normalizing effect on the family. This is true regardless of the nature of the school program or the particular learning difficulties of the child. The fact that a child may be recognized as different on some physical basis is not the sole determinant for his being accepted or rejected by his peers and neighbors. The child who participates in community experiences similar to that of other children is seen by the community to be more like other children than the child who is a non-participant.

The community that invests its energy, time and money in developing school programs for trainable children gives the parents some feeling that there is a commitment to their retarded children which is not too different from the commitment for other children. The devaluation and social distance felt by the parents of trainable children is lessened to some degree if an important agency, such as the school, includes their children in its program. The effect of trainable children attending public school should increase the communication between parents of such children and other parents, free them to participate more actively in community affairs, and in general reduce the pressures on the family. To deny these parents the expected and necessary community resources made available to other children is to increase their hardships greatly.

The supposition basic to the above discussion is that parents of trainable children generally want to have their children remain at home and attend public schools. Parental reaction against institutionalizing trainable children is due to the sincere desire to provide for them in the best way possible, consistent with some general understanding of their children's psychological and educational needs. Parents are usually considered crucial to the fulfillment of certain of these needs. Parental pressure for the schools to establish training programs does not stem from the illusion that such training will make their children "normal" but from their desire to assume parental responsibility.

The primary existing alternative to the public school is the state institution. The thesis of those educators who favor this "solution" is that the institutional personnel are trained and understand the development and the needs of these children. Further, trainable retarded children will be with children like themselves and not be exposed to the social stigma and psychological trauma that comes from being different. A major point that advocates of institutional programs stress is that the institution has a history of knowing how to care for these children and have designed programs that would be more effective than could be developed by public school personnel, who have had minimal exposure to trainable retarded children.

The present study was stimulated, in part, by the foregoing controversy and focuses on two questions: 1) the relative effects of education both on trainable retarded children living at home and those residing in state institutions, and 2) the effects of education on the parents of trainable retarded children living at home. The investigation of alternative proposals, such as community day care centers for training these children, is not possible as few such centers exist. The evaluation of the development of trainable retarded children can take place only within available alternative settings and relative to specific educational goals.

The implications of the study of the effect of school on retarded children extend beyond the assessment of direct educational services to these children. A mentally retarded child as a member of a family has an influence on the social and psychological adjustment of other family members. This influence is generally considered to be of a problematic nature. Such a child may place new demands on parents and siblings; demands which may require a reorientation of behavioral modes, attitudes and values. It has been frequently suggested that the child's attendance in a public school program can indirectly facilitate his parents' adjustment, and consequently the mental health of the family. An investigation of some of the parent variables, as they are affected by the child's placement in school is, therefore, a major interest of the present study.

It was hypothesized that the school, in addition to being of benefit to the retarded child, will contribute to the parents' effectiveness in handling the problematic situations which occur between them and their child. The assumption is that improvement in this relationship will increase the parents' effectiveness in meeting the problems of every-day life.

II. RELATED RESEARCH

Studies of behavioral changes in the trainable retarded as a result of school attendance, range from exploratory evaluational studies to experimental studies with comparison groups. A summary of the major efforts designed to formally evaluate the development of these children and a general critique of these studies follows.

Fils (1955) reports a pilot study for trainable children conducted under the auspices of the Los Angeles County Schools Office. The purpose of this study was to analyze the observable behavioral changes in the children for approximately a six month period; from January 1953 to June 1953. Data are reported on changes in intelligence test scores, color discrimination ability, and in social, emotional, physical and intellectual growth. The latter areas are presented as percentages of improvement as judged by the teacher, parents and administrator. Only the intelligence test and color discrimination data represent test-retest analysis. No formal evaluational procedures were agreed upon prior to the initiation of the study and no specific frame of reference was developed regarding the areas of growth to be observed.

There was a general agreement among observers that the children gained considerably in general emotional tone, attention span and language activities. These observers report slight but consistent improvements in most areas of social and emotional development. There was a slight increase in the median I.Q. of the children with some suggestion of a differential change between boys and girls. It is reported that 25% of the children who did not evidence color discrimination ability when initially tested, did so on retest.

The author concluded that the general improvement shown by the children suggested the feasibility of continuing the existing program. Further, the regular parent meeting appeared beneficial in terms of increased understanding and acceptance of their retarded children. A positive relationship between child development and parental understanding was postulated. An expansion of training activities, particularly in the areas of self-control, cooperation and health habits was recommended.

A demonstration project was conducted in the State of Michigan (Guenther, 1956) for the purposes of developing selection, training and evaluational procedures for programs for trainable retarded children. In addition to changes in the children, the attitudes of both mothers and fathers toward their children and the school were determined initially and for each succeeding year. Changes in intelligence test scores (Stanford-Binet) and Vineland Social Maturity Scale scores are reported for a two-year period and changes on an unstandardized Behavior Check List for a three-year period for nine subjects. The results are summarized as follows: 1) no change in I.Q. over the two-year period, 2) seven of the nine children showed higher social quotients, 3) there was little difference between initial and final ratings on the Behavior Check List, and 4) little consistency between teacher and parent ratings based on this check list.

The parents' attitude toward the school changed little in terms of their expectation that their children would improve as a result of school attendance. There was a decrease in the parents' emphasis on academic skills. The parents expressed the need for self-care, social activities and speech correction for their children. The parents indicated that professional personnel who counsel parents exaggerate the adequacy of institutional training programs. Most of the parents did not desire to institutionalize their children.

Three general recommendations are noteworthy:

1. The development of more refined instruments for measuring growth in personality and social adjustment should be undertaken.
2. A more penetrating analysis of parent attitudes and problems should be carried out.
3. An analysis of the differential effects of an educational program on children based on their diagnostic category.

The Illinois report (Goldstein, 1956) on the contribution of the public schools toward the training of trainable retarded children was conducted with 125 subjects over a two-year period. A non-school comparison group was not included. Test-retest data are reported on the following measures for the children: Kuhlman-Binet, Ontario, Merrill-Palmer, Vineland Social Maturity Scale and a Behavior Check List.

In general, the intelligence quotients of the children remained the same; therefore, the mental age growth over the two-year period was consistent with expectation. The authors point out that this could be considered favorable, since research on similar children in institutions has shown a decline in measured intelligence. Further, it was noted that a control group would be necessary to confirm their hypothesis that, once admitted to a training program, these children maintain a continuing rate of mental growth.

There was a slightly accelerated rate of mental growth during the first year of the study as compared to the second year. The investigators attribute this differential gain to initial over-enthusiasm by parents and teachers.

The Social Age of the children on the Vineland Social Maturity Scale showed a gain of five months in each of the two years, with the social quotient remaining relatively constant.

Gains on the Behavior Check List were considerable during the first year, based on teacher ratings; however, no progress was recorded during the second year. The parents recorded less progress than the teachers during the first year, but indicated some improvement during the second year. The parents, in all instances, rated the children higher than did the teachers. The investigators hypothesized that the parent-teacher differences in rating the children were due to: 1) greater initial familiarity on the part of the parents, 2) increasingly realistic attitudes on the part of the parents regarding their children's abilities, 3) over-rating on the part of the teachers as they became more acquainted with the children and 4) unreliability of the Behavior Check List.

A parent attitude interview was conducted for both mothers and fathers at the beginning, middle and end of the study. The parents' expectations of the school remained favorable over the two-year period. The parents felt that their children were accepted in the neighborhood. There was a drop-off of parents' social activities during the second year. The children were reported to be more independent at home, with fathers participating more in the training of the children at home. The investigators report an increased recognition on the part of the parents that their children will not be self-supporting with a concomitant increase in planning to care for their children at home.

The first reported study comparing school and non-school trainable mentally retarded was conducted by George Peabody College for Teachers, (Hottel, 1958). Twenty-one matched pairs were studied for a one-year period. The instruments utilized to assess change in the children's behavior were the Stanford-Binet (Form L), the Vineland Social Maturity Scale and an unstandardized Rating Scale of Child Behavior. The parents of the children were studied via a modified version of the Fels Scales of Parent Behavior.

There was no significant difference of the mean change scores between the experimental and control groups on mental age, intelligence quotient, social age, social quotient, behavioral skills or home adjustment. There was, however, a significant increase in both M.A. and I.Q. for the high I.Q. experimental group over both the low I.Q. experimental group and the high I.Q. control group. Similar findings were not found on the Vineland Social Maturity Scale. The investigators felt that the Behavior Rating Scale was not a sufficiently adequate instrument to warrant further analysis.

A number of limitations of the Peabody study are cited by its authors: 1) lack of adequate measuring devices, 2) inter-rater differences, 3) short period of treatment (one year), 4) small sample size, 5) lack of standardization of training from class to class and 6) lack of comparable teacher proficiency.

Johnson and Capobianco (1957) report a two-year study of trainable retarded children attending school in their communities and in institutional settings. Changes in the children's growth during this period were evaluated on the following instruments: The Behavior Check List, the Vineland Social Maturity Scale, an articulation test, a language test and the Fels Child Behavior Rating Scales.

Gains on the Behavior Check List were consistent over the two-year period only for the I.Q. group above 30. The growth of the public school children was similar to that of the institutional children except that the former were initially at the lower level and generally achieved somewhat higher final scores. These ratings are based on teacher observation.

Each of the I.Q. groups for both the public school and institutional children showed growth in social age on the Vineland over the two-year period. Generally, the higher I.Q. children showed greater increases in social age than the lower I.Q. children. A slight tendency of greater increase in social quotient over the two-year period was associated with higher I.Q.'s. The public school group made a slight improvement over the institutional group on each retest of the articulation test with the number of errors decreasing as I.Q. increased.

The Test of Language Abilities was given to an experimental and control group of trainable retarded children who were comparable in regard to M.A. and I.Q. The experimental group was given therapy for one school year; whereas, the control group received no such training. The non-therapy group showed greater gains than the therapy group, although the difference in gains was not statistically significant. Apparently the samples involved in this aspect of the study are not part of the group on whom the previous findings are based.

The pattern of behavior change on the Fels Child Behavior Rating Scale was similar and in a positive direction for both the institution and public school samples.

The findings reported above are based primarily on teacher ratings. In the opinion of the authors, of the various psychological tests administered to the children, the Stanford-Binet was considered to be the most useful test.

Peck (1960) compared the progress of trainable retarded children in four environmental situations; children attending public school special classes, children attending similar classes maintained by a community agency (parent group), children attending classes in a residential (institutional) situation and children who received no training in a formal program. The design of this study in terms of the treatment comparisons is the most comprehensive to date. However, the sample size in each situation was extremely small, being 9, 6, 8 and 7 respectively. The authors are aware of the sampling inadequacy and suggest that their findings indicate only trends. This study was conducted for a two-year period. The children were evaluated with the Stanford-Binet, Vineland Social Maturity Scale and a rating scale developed by the investigators. The speech, sensory and coordinative ability of the children were also evaluated.

The training program included seven areas: social adjustment, self-care, language development, physical development, arts and crafts, music and economic usefulness. The curriculum and teaching methods were developed by the research staff and the teachers. There was an effort to maintain similar learning situations for the three experimental groups.

There was no significant difference between pre and post I.Q.'s and S.Q.'s within any of the groups. The three experimental groups did not change differentially, however, the investigators surmise that the three experimental groups probably showed significant increases over the control group. They report a trend of greater progress during the first year than during the second year and greater progress during the first half of each year than during the second half.

III. PREVIOUS RESEARCH AND ITS RELATIONSHIP TO THE PRESENT STUDY

A number of limitations occur in virtually all of the studies designed to assess the effects of education on trainable mentally retarded and the effects of such training on their parents. The small numbers of subjects studied over a short period of time with no comparison group raises doubts regarding the stability and generalizability of the findings of many of these studies. The intuitive nature of the evaluation of change in some studies precludes the replication of their work. Virtually all previous investigators indicated that they were required to use instruments that were inadequate for assessing change in trainable children. The development of a sufficiently sensitive scale for this purpose, it is pointed out, would be a major contribution to education and psychology.

The investigation of the relationship between the training the child receives at home and in school and their mutual effects on both parent and child has been virtually neglected. Research instruments that are specific to the parent-retarded child relationship are not available. Criterion-oriented research as related to changes in children is absent in the studies that have included parents of trainable children.

A major lack in a number of studies is the systematic analysis of teacher variables and classroom procedures. Although the specification of curriculum content is sometimes made clear, an analysis of classroom observational data and teacher related data as associated with changes in children have rarely been attempted.

The present study permitted the testing of school vs. non-school differences with sufficiently large samples within community and institutional settings over a two-year period. The parents of the community children were studied to determine the effects of their children's school attendance on them. Both the child and parent assessment devices were developed specifically for this study and underwent extensive pre-testing prior to their experimental use.

IV. CRITERION MEASURES

The effect of school in increasing the relative independence of trainable retarded children was measured along the continuum of social competence. The contribution of schools in measuring the parents' effectiveness in training such children at home was assessed along the continuum of parent adaptability.

The rationale and conceptual framework of social competence and parent adaptability follows:

A. SOCIAL COMPETENCE MEASURE

Social competence is explicitly included as a criterion of mental retardation (Doll, 1941; Tredgold, 1952; Porteus and Corbett, 1953; Louttit, 1957). Although independence is implicit in the concept of social competence (Malley, 1935; Joel, 1939; Patterson, 1943; Doll, 1953), evidence to date supports the hypothesis that trainable mentally retarded children will not achieve complete independence nor, for that matter, attain social skills that will contribute much beyond their immediate family and peer environment. However, it is important to such children and to those around them that they develop an increased ability to care for themselves, that they become aware of the requirements of certain social and interpersonal requirements and that they be able to communicate their wants. The development of these behaviors are considered important for these children regardless of their environmental situation.

Kirk (1957) has summarized the educational goals in regard to the trainable retarded child: (a) The child should be helped to learn basic self-care tasks (such as dressing, eating, toileting) and to protect himself from common dangers in the home, school and community. (b) He should receive help in developing an adequate social adjustment in the home and neighborhood and in learning to share, respect property rights and to cooperate in a family unit and with his neighbors. (c) He should receive help in developing his language abilities. (d) He should be helped to eventually achieve some measure of economic usefulness, limited though this may be. Suggested curriculum guides of both public schools and institutional programs generally agree with these goals. Discussions with parents, teachers and others responsible for the care and training of severely retarded children indicate that they, too, agree with these goals.

These behaviors, termed here social competence, represent the criterion measure for the child aspect of this study. Broadly speaking, social competence is the development of particular skills which ultimately permit the child to achieve self-sufficiency and increased social responsibility. Specifically, the development of the child's social competence will be reflected in increased manipulative or motor abilities, moving from other-directed to self-initiated behavior, moving from self-oriented to other-oriented behavior and an increased ability to communicate wants to others.

The need for reliable evaluational instruments for assessing the development of the trainable retarded child has been frequently cited (Kirk, 1957; Goldstein, 1956; Guenther, 1956; Hottel, 1958; Johnson and Capobianco, 1957). The Vineland Social Maturity Scale has not proved to be appropriate for measuring fine discriminations in the ability of these children because there are few items at the lower ages. Hollinshead (1952) finds that the Vineland scoring manual is insufficiently precise and that scoring judgments are not easily made. McDonald (1957) states that several of the scoring categories require a dubious inference on the part of the examiner, and are utilized in the scoring in a purely arbitrary manner. Kirk (1957) points out that the reliability of the Vineland Social Maturity Scale is not known for this type of child.

What was required for trainable mentally retarded children was a scale which included behaviors and/or skills that were amenable to training or education that could be evaluated along the continuum of independence. In order to meet this requirement, the San Francisco Social Competency Scale was developed which permitted the measurement of fine discriminations in the development of social competence. This scale was comprised of four subscales: Self Help (23 items), Initiative-Responsibility (16 items), Social Skills (15 items) and Communication (18 items). There were four or five alternatives arranged in order of difficulty within each of the 72 items. Each of the item alternatives were assigned a numerical value from one through four or five. The parent was instructed to select the alternative which best described the child's typical behavior. The sum of the numerical values of the alternatives selected for each subscale constituted that subscale's score. The four subscales were summed to provide a total social competency score.

The definitions of the subscales and the scale development procedures are presented in Appendix A and the San Francisco Social Competency Scale is presented in Appendix B.

B. PARENT ADAPTABILITY

Literature in the field of parent-retarded child relationships has stressed the difficulty parents have in accepting their children's deficiencies (Begab, 1956; Kanner, 1952; Rosen, 1955; Sheinn, 1951). Acceptance of the fact of retardation requires that parents change their present set toward the child which would, in turn, affect day-to-day relationships as well as future expectations. In addition to the change in the parents' level of aspiration for the child, the value system of the parents must undergo modification in terms of the parents' conception of the role of the community and society toward the child. "The crucial factors," according to Blodgett (1956), "appear to be not in the child's behavior, but in the parental capacity to make adaptations and to accept things as they are" (pg. 53).

What predictions can be made regarding the possible effects of public school classes on parents of trainable retarded children given this added social and psychological stress? First, it can be assumed that parents of trainable retarded children are not different, in any basic psychological and emotional sense, from members of the general population. It is not predicted, therefore, that special education will have any profound therapeutic effect in terms of the parents' intra-psychic conflicts. However, public school classes can conceivably have a significant effect on parent-retarded child conflicts which are situationally determined. The tensions that may be created by these situational conflicts may be reduced by virtue of the child's attendance in public school classes. The realization that the community recognizes the importance of school, offers the parents of such children the hope that his situation is not completely static and that beneficial changes can occur. Hope, when it is realistically based, is an essential component of adequate adjustment (French, 1952).

The exposure of a retarded child to teachers and other trained professional personnel provides the parent with an opportunity to reexamine his expectations and aspirations for the child. The parent may obtain a different and perhaps more realistic perspective of the child's limitations and capabilities. Finally, public school classes will relieve the parent of responsibility for the child for several hours a day. The relief of constant pressure for care of the child can free the parent, particularly the mother, to devote her energies to new as well as existing responsibilities.

The parent's ability to deal effectively with the problems of training the retarded child at home was defined for this study as "parent adaptability."

The conceptual framework of adaptability developed for this study has been derived principally from the theoretical formulations of John Dewey, H. G. Mead and W. I. Thomas. The basic assumption made was that the parent-child relationship exists as a series of problem solving situations. Such situations involve mutual expectations as to the behavior of each participant. From the point of view of the parent, he not only has expectations for the child in a siteation, but also in terms of his parental role. A parent's actions have two purposes; the resolution of immediate problems and the socialization of the child.

A parent responding to a child in any situation would theoretically have an infinite number of behavioral acts to draw upon. That this is not the case, is due to a number of factors attributed to personal experience and social structure. On the basis of past experience, some behavioral forms have been reinforced while others have not. The parent's choice of available responses is also limited by normative standards in the social structure. The normative pattern prescribes the rights and duties of a particular social position, and in so doing, structures the forms of interaction possible in any situation.

Within the limits of these experiential and social restrictions on behavior, it is assumed that a wide range of choice of action still remains. From a problem solving point of view, the normative pattern can provide only the skeletal structure for effectively dealing with a situation. It follows that no specific action or form of behavior can be considered as right or best for any individual, as there exists a range of responses available to an individual within his personal experience and the normative patterns of his culture and sub-culture. For example, a middle class mother may respond to a child's misbehavior by giving him "love" or reassurance, whereas a working class mother may spank her child for the same behavior. Either action, if adhered to rigidly and mechanically, may be fruitless and unsuccessful.

Considering the constantly shifting nature of parent-child relationships, the assessment of parental action should include his perception of the specific situation. It is the "definition of the situation" which W. I. Thomas (1928) has referred to as the essential stimulus for action. Interactions and transactions which occur in a situation affect constant changes and call for constant situational redefinitions.

This dynamic interpretation of behavior presents a methodological problem to the researcher who must make his assessment at a particular point in time. The theoretical framework employed by this project suggests at least a partial solution to the problem, that is, the recapitulation of the problem solving process. It is assumed that, in facing any situation, an individual will bring to bear his experience in similar situations and his awareness of alternative forms of action. These two factors, in combination with the person's assessment of the situation, will result in a plan and, finally, specific action. This process, referred to as adaptability, is amenable to empirical exploration to the extent that it can be verbalized and/or observed.

Parent adaptability is defined as the parent's ability to deal effectively with problematic situations by changing roles, attitudes and actions in terms of new or modified understandings of the situation with which he is confronted. A discussion of the term ability and the concept of adaptive behavior is, therefore, necessary to fully understand the concept of adaptability. Baldwin (1958) states that the term ability has been defined in two senses; it reflects what an individual "can"do and it can also be used as a primary factor basic to a specific act. In either case it is considered as, ". . . a necessary but not sufficient condition for actual performance" (pg. 199). A distinction is therefore made between being able to accomplish a feat and actually doing so. Baldwin states further that ". . . ability is a meaningful concept only because it describes the characteristics of a person which contributes to his carrying out adaptive behavior" (pg. 210). Adaptive behavior is "result oriented", that is ". . . behavior oriented to the consequences of action." Thus, a problem solving analysis demands more than a specification of ability; it must include the conditions under which adaptive behavior occurs. Baldwin suggests than one of the added requirements necessary to convert the ability into adaptive action is motivation. The concept of environmental opportunity or demand should be included, for as Baldwin recognizes, some situations may demand greater skill than others for achieving the desired result.

The conceptual framework of adaptability is primarily concerned with the conscious thought processes of the parent. The assumption is that people who can think and express themselves in adaptable terms are more inclined to act in a problem solving manner.

Underlying the concept of adaptability are two continua: generality-specificity and unguided - cognitively guided behavior. The generality-specificity continuum assumes that the greater the ability to specify the elements in the situation, the greater the potential for problem solving. The unguided - cognitively guided continuum is related to Baldwin's concept of adaptive behavior as behavior oriented to the consequences of action. Behavior which is "cognitively guided," in Baldwin's terms, will be, in all probability, effective problem solving behavior. This continuum ranges from behavior which is unvaried under all circumstances (i.e., unguided) to behavior which is consciously employed to effect specific and long range goals (i.e., cognitively guided). The mid-point of this continuum is a simple reaction to situational stimuli which, although guided, is not problem solving oriented.

The four components essential to adaptive behavior toward a child are flexibility, empathy, motivation and availability of resources. These components combine to form what Burgess and Wallin (1953) call "adaptability." Empathy and flexibility are considered as abilities, whereas motivation and availability of resources in the environment are factors which make it possible to employ these abilities effectively. Only three of the four components are employed in the determination of adaptability in the present study. "Availability of resources" is difficult to assess and is, at least in part, incorporated in the construct of flexibility.

In order for behavior to be effective, the four components of adaptability are conceived of as acting in combination. Motivation is seen as basic to adaptive behavior. If the parent refuses to do anything about a situation it is assumed that nothing will be done, whatever his potential problem solving skills. Conversely, the parent may be highly motivated, but if he does not have the understanding and flexibility necessary to determine the appropriate action and respond accordingly, the action taken will probably be ineffective. In addition, neither empathy nor flexibility should produce effective results without the presence of the other. The ability to understand the child and the situation (empathy), while lacking a repertory of alternative actions (flexibility) should be as ineffective as having a wide repertory of actions without understanding.

In order to measure parent adaptability, an interview schedule was developed comprised of 43 questions and covering 24 problematic parent-child situations. The interviews were tape recorded and each parent's response to the questions were rated on the components of flexibility, empathy and motivation. The flexibility and empathy components consisted of 15 questions each, and the motivation component consisted of 13 questions.

The scoring procedure is summarized as follows:

1) The parent's response to each question was judged and rated on a six-point scale.

2) For purposes of data analysis, this six-point scale was converted to a four level scoring system. This was accomplished by combining the levels at the extremes of the scale. Thus, responses that were judged at the two lowest levels were given a score of one (low); responses at the two highest levels were given a score of four (high).

3) The parent's scores for each component were distributed. When a subject had five or more responses scored at a particular level, he was assigned that level for that component. All other parents were assigned a score of two. In no case did five or more scores fall into more than one level for a given parent.

4). The level scores for each component were then summed to yield a total adaptability score.

A discussion of the development of the adaptability interview schedule, the procedures for data collection and the method of judging the parents' responses are reported in Appendix C. The criteria for judging the responses and a copy of the adaptability interview schedule are reported in Appendixes D and E respectively.

V. SCOPE OF THIS REPORT

The material contained in this report was gathered under three separate contracts as follows:

Phase I[2] (March 15, 1957 - June 30, 1958) was primarily concerned with the experimental rationale, the experimental design, the development of research instruments and agency contacts relevant to sample selection.

Phase II[3] (July 1, 1958 - June 30, 1959) represented the first year of the formal experimental period, during which all of the pre-test data were obtained for both the child and parent samples. Classroom observations were initiated during this period, teacher interviews were conducted and other pertinent school-related data collected.

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[2] Study of the Effect of Special Day Training Classes for the Severely Mentally Retarded, Final Report of Phase I, March 15, 1957-June 30, 1958. United States Office of Education, Dept. of Health, Education and Welfare, Contract #SAE 6439.

[3] Study of the Effect of Special Day Training Classes for the Severely Mentally Retarded, Final Report of Phase II, July 1, 1958-June 30, 1959. United States Office of Education, Dept. of Health, Education and Welfare, Contract #SAE 8025.

Phase III (July 1, 1959 - June 30, 1961) included the continuation of the experimental period, the analysis of the data collected during the project and the writing of the final project report.

This report covers the project's activities from March 15, 1957 through June 30, 1961. In order to maintain the integrity of the research as an on-going activity, no effort has been made to analyze this work in terms of contract periods.

CHAPTER TWO

HYPOTHESES, RESEARCH DESIGN AND PROCEDURES

The design of this research was developed to permit an analysis of behavioral changes in school and nonschool trainable mentally retarded children residing in community and institutional settings. Further the design permits an analysis of behavioral changes in the parents of the subjects residing at home. Ratings on each of the criterion measures of social competence and parent adaptability were obtained for the children and parents respectively, at the initiation and conclusion of the two year experimental period. In addition to the measures of social competence and adaptability, information was obtained from the family including parental age, education, income and occupational prestige.

Each of the classrooms in which the school subjects were enrolled was visited three times during the two-year experimental period. The purpose of these visits was to obtain detailed descriptive data regarding the organization of the school programs and the curricular content.

I. HYPOTHESES AND RESEARCH DESIGN

The hypotheses immediately following specify the direction of the predicted changes for both the children and their parents.

Hypothesis 1. Trainable mentally retarded children living at home and attending public school classes will show greater increments in social competence than will a comparable group of children not attending such classes.

Hypothesis 2. Institutionalized trainable mentally retarded children attending school within the institution will show greater gains in social competence than will a comparable group of institutionalized children not attending the institutional school program.

Hypothesis 3. Trainable mentally retarded children attending public school classes will show greater increases in social competence than will institutional trainable retarded children whether or not they attend school within the institution.

Hypothesis 4. Trainable mentally retarded children living at home and not attending public school classes will show greater gains in social competence than will institutionalized trainable retarded children whether or not they attend school.

Hypothesis 5. Parents of children attending public school classes in their communities will show greater increments in adaptability than will parents whose children do not attend such classes.

The validity of these hypotheses were tested by an experimental design which permitted the following analyses of change scores for the criterion measures over a two-year period.

Comparisons on the criterion of social competence:

Community public school children vs. Community nonschool children
vs. Institutional school children
vs. Institutional nonschool children
Community nonschool children vs. Institutional school children
vs. Institutional nonschool children
Institutional school children vs. Institutional nonschool children

Comparisons on the criterion of adaptability:

Parents of children attending public school classes
vs.
Parents of children not attending public school classes

II. SAMPLE SELECTION PROCEDURES

The experimental design required school-nonschool comparisons on the criterion of social competence within community and institutional settings. In order to make school-nonschool comparisons, it was necessary to obtain children who had no prior school experience. Prior school experience was defined as attendance for more than one-half of a school year in a public school class or in a class for either educable or trainable mentally retarded children. Parent-operated classes or nursery school classes meeting one or two hours twice a week were not considered as prior school experience.

In the case of the community school children, referred to as the Community Experimental Group, the determination of each child's eligibility for admission to a public school class was made by an official of the school district. The criteria that was utilized by the public schools for the selection of trainable children are specified in the California Administrative Code (1960) and are presented below.

A. PHYSICAL CONDITION

A child must:

(1) Be able to hear spoken connected language and be able to see well enough to engage in special class activities without undue risk;

(2) Be ambulatory to the extent that no undue risk to himself or hazard to others is involved in his daily work and play activities;

(3) Be trained in toilet habits so that he has control over his body functions to the extent that it is feasible to keep him in school.

B. MENTAL, EMOTIONAL AND SOCIAL DEVELOPMENT

A child must:

(1) Be able to communicate to the extent that he can make his wants known and be able to understand simple directions;

(2) Be developed socially to the extent that his behavior does not endanger himself and the physical well being of other members of the group;

(3) Be emotionally stable to the extent that group stimulation will not intensify his problems unduly, that he can react to learning situations and that his presence is not inimical to the welfare of other children.

Generally, school programs for the trainable retarded include those whose intelligence quotients range from 20 to 60. Further, the minimum age requirement for admission to a California public school program for trainable children is five years. Subjects enrolled in the study ranged in chronological age from five to thirteen years.

The community nonschool children were selected utilizing the same criteria as for the experimental group; however, the determination of eligibility was made by a representative of the project staff because no school authorities were involved. These children, referred to as the Community Control Group, were drawn from two sources: (1) communities in which public school classes for trainable mentally retarded children exist, but where extremely long waiting lists and/or transportation difficulties had prevented the enrollment of some children in these classes and (2) communities which had no public school classes for trainable children. Approximately 75% of the control subjects came from the latter communities.

The same criteria used for the selection of community children were employed for selecting the children within the institution. A list of children with chronological ages and intelligence quotients falling within the same ranges as those of the community subjects was secured from the institution's medical records. These records were reviewed and the children were retested with the Stanford-Binet, Form L (1937 Revision).

Children with severe physical or emotional handicaps were eliminated, as were those whose retest on the Binet did not fall within the designated range of intelligence quotients. Members of the institutional school staff screened each child to determine his eligibility for school, but the final decision to select a child for the study was made by a member of the project staff. The Institutional Experimental Group (school subjects) and the Institutional Control Group (nonschool subjects) were selected from this pool of children. The children living in wards closest to the school building were selected for the Institutional Experimental Group because of the difficulty of obtaining transportation within the institution.

The experimental design also includes the comparison of changes in adaptability of parents of school and nonschool community children. The parents of institutionalized children were not included in the study because they did not have day-to-day contact with their children, which was a necessary prerequisite for rating the children's social competence and for answering questions in the adaptability interview. The criterion for the inclusion of parents in the adaptability aspect of the study was that their child be one of the community subjects selected for the study.

III. DATA COLLECTION PROCEDURES

Public and private agencies; such as mental health clinics, probation departments, health departments, parent groups and public school districts, were contacted to request their participation in locating and soliciting the cooperation of appropriate families. These agencies were informed of the criteria that the children would have to meet for inclusion in the study and they, then, contacted the parents of trainable retarded children to request their participation. After parental consent was obtained, project staff members made arrangements for testing the children and interviewing the parents. All of the families participating in the study resided in California and Oregon. In addition to the family visits, arrangements were made with the public school and institution administrations to visit the classrooms and obtain data from the teachers.

A. PROCEDURES FOR THE COLLECTION OF COMMUNITY DATA

The families were visited initially by a representative of the project staff during August and September of 1958. The parents were informed that the purposes of the project were to study the social competency development of mentally retarded children and the manner in which they are trained in the home. No reference was made to school-nonschool or to community-institutional comparisons.

After this introduction, information regarding the retarded child and the family was obtained. The Family Information Form, which is presented in Appendix F, was utilized for this purpose. A tape recorded adaptability interview was conducted with each parent independently. Immediately following the interview, the child's social competence was rated by the mother and by the father independently.

The Stanford-Binet, Form L, was administered to nonschool children. It was not necessary to administer this intelligence measure to the school children, because intelligence test data were available from public school records. The School Information Form is presented in Appendix G.

Parental consent to write to the family physician or clinic was obtained in order to determine the child's diagnostic classification.

At the conclusion of the first visit, the parents were informed that arrangements would be made for follow-up visits. The next visits to the homes were in the Fall of 1959, approximately one year after the initial data were obtained. At that time, only the social competency ratings were obtained. The final home visits were made during May and June of 1960, at which time a repitition of the initial procedure took place. In terms of the criterion measures, then, three social competency ratings[1] were obtained and two parent adaptability interviews were conducted during the two-year study period.

The majority of the initial data and the midratings were obtained by the project staff. However, virtually all of the final data were obtained by psychologists and social workers who were employed by the project for this specific purpose. These individuals were given a thorough orientation as to the procedures for obtaining the study data. However, they were not made aware of the experimental design or of prior test results.

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[1] Throughout this report, the first social competency rating is termed "initial rating," the second social competency rating is termed "midrating" and the third social competency rating is termed "final rating."

B. PROCEDURES FOR THE COLLECTION OF INSTITUTIONAL DATA

The school principal of the participating institution arranged for the ward technicians[2] to provide initial and final social competency ratings. The technician who was most familiar with the child provided the ratings. In most instances, the same technician provided both the initial and final ratings for a particular child; there being few ward personnel changes during the experimental period. School personnel, other than those involved in the study, assisted in obtaining these data. The project staff was responsible for the psychological testing of the institutional subjects.

C. PROCEDURES FOR THE COLLECTION OF SCHOOL DATA

In order to evaluate the differential changes in social competence within the school group, it was necessary to obtain information regarding the school programs. Further, this information was considered useful for providing a basis for interpreting the social competency changes for the school and nonschool subjects.

An observation schedule was developed in order to obtain detailed information regarding the organization and specific curricular content of these programs. Three observations were conducted of the classrooms in which study subjects were enrolled. The first observation took place in the Spring of 1959. The second and third observations were conducted during the Fall of 1959 and the Spring of 1960. The Classroom Observation

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[2] "Ward Technician" is the classification utilized by the California State Department of Mental Hygiene for those individuals who are responsible for the day-to-day care of the patients.

Schedule is presented in Appendix H.

Each teacher provided initial and final social competency ratings for the children in the study. Because not all of the items in the San Francisco Social Competency Scale are observable in the school situation, the statement "No Opportunity to Observe" was included for each item. The teachers were instructed to check this statement for those items where there was no opportunity to observe the behavior in the school situation.

A teacher adaptability interview, which paralleled the parent adaptability interview, was conducted with the teachers in the study. The interview was tape recorded in the classroom at the conclusion of the school day. In addition, a questionnaire dealing with the teachers' conception of their own training and the objectives of the school in educating the trainable mentally retarded was administered to the teachers. The Teacher Adaptability Interview Schedule is presented in Appendix I.

IV. COMPOSITION AND CHARACTERISTICS OF SAMPLES

Initial social competency ratings were obtained for a total of 239 community and institutionalized trainable mentally retarded children. The number of study subjects, after attrition, totalled 182. Table 2:1 reports the samples prior to attrition, the reasons for attrition and the final study samples. The greatest attrition occurred in the Community Control Group because, during the two-year experimental period, two additional public school classes were inaugurated and a large segment of this group was enrolled in them.

TABLE 2:1

SAMPLES PRIOR TO ATTRITION, REASONS FOR ATTRITION
AND FINAL STUDY SAMPLES

	Community		Institutional	
	Cont.	Exp.	Cont.	Exp.
Samples Prior to Attrition	88	73	35	43
Attrition:				
Admitted to institution	(8)	(5)		
Excluded from school		(4)		(3)
Entered public school	(24)			
Unable to locate parent	(8)	(1)		
Refused to participate	(1)			
Child deteriorated	(1)			
Transferred			(1)	
Deceased			(1)	
Total Attrition	42	10	2	3
Final study Samples	46	63	33	40

Table 2:2 presents the composition of the four groups by sex and diagnostic classification.

The study sample, after attrition, did not differ significantly from the original sample on measures of CA, MA, IQ and initial social competency scores.

The means and standard deviations of the children's chronological ages, mental ages and intelligence quotients are reported in Table 2:3.

The analyses of variance across the four groups for each of these variables yielded significant F ratios. Thus, it was concluded that, although all children met the study criteria, the community and institutional samples differ with respect to these variables.

TABLE 2:2

COMPOSITION OF COMMUNITY AND INSTITUTIONAL CONTROL AND EXPERIMENTAL GROUPS BY SEX AND DIAGNOSTIC CLASSIFICATION

	Sex		Diagnostic Classification[1]		
	Male	Female	Mongoloid	Organic	Undifferentiated
Community					
Cont.	24	22	17	12	14
Exp.	31	32	31	18	14
Institution					
Cont.	23	10	19	9	12
Exp	30	10	8	9	16

[1] The child's classification was provided by the family physician or clinic. This information was not available for some subjects.

Adaptability interviews were conducted, whenever possible, for those parents who provided social competency ratings for their children. The nonavailability of some parents for both the initial and final interviews accounts for the reduced parent samples. Further, the inclusion of the parent in the adaptability aspect of the study was dependent upon the child's remaining in the study for the two-year experimental period. In the event that a child was lost to the study, the parent was necessarily eliminated from the study. The characteristics of the parents who participated in both the initial and final adaptability interviews are presented in Tables 2:4 and 2:5.

TABLE 2:3

MEANS, STANDARD DEVIATIONS AND ANALYSES OF VARIANCE FOR CHRONOLOGICAL AGE, MENTAL AGE AND I.Q. FOR COMMUNITY AND INSTITUTIONAL CONTROL AND EXPERIMENTAL GROUPS

		Community		Institutional		
		Control	Experimental	Control	Experimental	F
	N	46	63	33	40	
CA	Mean	100.09	103.25	119.79	123.62	12.35**
	S.D.	23.53	18.30	24.79	23.48	
	N	44	56	33	40	
MA[1]	Mean	38.32	42.62	36.24	37.08	3.34*
	S.D.	12.15	8.98	11.30	10.88	
	N	44	56	33	40	
IQ[1]	Mean	38.70	41.86	29.88	31.20	19.43**
	S.D.	9.30	8.09	7.99	9.41	

*P $<$ .05

**P $<$ .01

[1] This information was not available for some subjects.

There were no significant differences on the variables of age, education, income and occupation, as reported in these tables, within or between the groups of parents providing the social competency ratings and the groups of parents participating in the adaptability interviews. Comparable data on occupation, income and education for the families of institutionalized children were not obtained because this information, as contained in the institutional records, was outdated.

TABLE 2:4

AGE, EDUCATION AND INCOME OF PARENTS PARTICIPATING IN THE ADAPTABILITY INTERVIEW[1]

	Age		Education		Income[2]	
	Mother	Father	Mother	Father		
Control						
N	35	31	34	31	N	30
Mean	39.4	43.9	11.4	11.9	Md.	5700
S.D.	8.5	8.2	2.9	2.4	IQR	3500
Experimental						
N	44	37	42	37	N	36
Mean	36.8	39.0	11.7	11.4	Md.	6100
S.D.	8.3	9.9	2.4	3.4	IQR	1700

[1] This information was not available for some subjects.

[2] Reported in medians and interquartile ranges for major wage earner.

TABLE 2:5

OCCUPATIONAL LEVEL OF MAJOR WAGE EARNER[1] FOR THE PARENTS PARTICIPATING IN THE ADAPTABILITY INTERVIEW

Occupational Level[2]	Description	Percentage Cont. N=31	Exp. N=37
5	Professional and high level administrative	3.2	13.5
4	Semi-professional, middle level administrator, employer of 100 people	12.9	2.7
3	High skill manual small business: 5-10 employees, high level white collar	54.8	35.1
2	Self-employed (1 to 2 employees), routine white collar	9.7	27.0
1	Unskilled laborers	19.4	21.6

[1] This information was not available for some subjects.

[2] Derived from the breakdown of the N.O.R.C. data as reported in Kahl (1957)

V. PROCEDURES FOR DATA ANALYSES

Prior to the testing of the hypotheses of the study, analyses of variance were performed in order to determine the comparability of the Community and Institutional Control and Experimental subjects on chronological age , mental age, intelligence quotient and social competency score. The difference between the mothers' initial and final social competency ratings was utilized as the measure of change in the children's social competence during the two-year experimental period. The mean of these change scores for each study group was computed and *t* tests were performed between the means of these groups. The mothers' ratings of their children's social competence were utilized as the criterion ratings because mothers have the greatest opportunity to observe these behaviors on a day-to-day basis. Although there may be bias in mother ratings, there is no basis for assuming that bias will operate differentially for the experimental and control groups.

White's[3] test of significance between groups was performed on initial adaptability scores in order to determine the comparability of the mother and father samples of the community control and experimental groups. The Wilcoxon matched-pairs signed-ranks test of significance was utilized to test the difference between the distributions of the change scores of these groups.

The parents were dichotomized into high and low categories based on their initial adaptability scores, and t tests were performed between the children's social competency change scores for these categories of parents.

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[3] White's test is a rank test for the difference between two groups (Edwards, 1956, p. 417)

The differences between the initial and final social competency ratings for each diagnostic category and for males and females were tested by t tests. Analyses of variance of the social competency change scores were performed for the diagnostic categories as well as a t test between the change scores of males vs. females. The relationship of social competence and parent adaptability to family variables, such as socio-economic status, age of parents and number of siblings was determined by gamma correlation coefficients.[4]

The data obtained from the public schools were analyzed in terms of such factors as teacher adaptability and instructional adequacy. Analyses of the children's social competency change scores were in terms of these factors. The responses to the teacher questionnaire are presented in descriptive form.

The social competency and parent adaptability scale properties, such as item and sub-scale intercorrelations and reliability data, are reported in Appendixes A and C respectively.

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[4] In cases where the data did not meet the assumptions underlying the more conventional procedures, gamma coefficients (a nonparametric statistic) were computed. Gamma measures the directed order of association; that is, the degree to which the order of X is generally the same as the order of Y. Specifically:

$$\text{gamma} = \frac{\text{probability of like orders minus probability of unlike orders}}{\text{sum of like and unlike probabilities}}$$

CHAPTER THREE

TESTS OF MAJOR HYPOTHESES

Trainable retarded children have long been thought to be essentially the responsibility of state institutions, although Saenger (1960) believes that there is an increased preference to care for such children at home. It was felt that psychologically and educationally a homogeneous environment, such as a state institution where the pressures for development would not be unrealistic and where no comparisons would be made with the retarded child's "normal" siblings, would be more beneficial than remaining at home. In addition, it has been felt that trainable children would receive greater stimulation in a state institution, since the expectations of the institution are more oriented toward the limitations of such children than is the home.

This study was designed, in part, to test the assumption that the home environment is more conducive to the development of social competence in trainable mentally retarded children than is the institutional environment. It has always been assumed that attending school, whether within the community or within the institution, is more beneficial than not attending school. This chapter reports the tests of the four hypotheses relevant to changes in social competence. The initial and final social competency data, stability coefficients and the significance tests (t) over time are reported for the Community and Institutional Control (nonschool) and the Experimental (school) Groups.

Also reported in this chapter is the test of Hypothesis 5, which is concerned with the effects of trainable children's school attendance on parent adaptability. The prediction of greater gains in adaptability for parents of school children was based on the assumption that, as a result of their children attending school, parents would reevaluate their expectations of their children and modify their behaviors toward their children, thereby increasing their effectiveness with them.

I. ANALYSIS OF SOCIAL COMPETENCY DATA

The analyses of variance across the Community and Institutional Control and Experimental Groups for chronological age, mental age and IQ were significant (see Table 2:2). The correlations between these variables and the social competency change scores, as reported in Tables 3:1a and 3:1b, are generally of zero order, thus obviating further analyses of social competency change scores with the chronological ages, the mental ages and the intelligence quotients of the children.

TABLE 3:1a

CORRELATION (PEARSON r) BETWEEN SOCIAL COMPETENCY CHANGE SCORES AND INITIAL CHRONOLOGICAL AGE, MENTAL AGE AND INTELLIGENCE QUOTIENT FOR COMMUNITY CONTROL AND EXPERIMENTAL GROUPS

	CA		MA[1]		IQ[1]	
	Cont.	Exp.	Cont.	Exp.	Cont.	Exp.
N	46	63	44	56	44	56
SH[2]	-.18	.00	-.07	-.12	.12	-.06
IR	.01	-.10	.23	-.16	.24	-.04
SS	-.02	-.28	.00	-.09	-.04	.13
C	-.09	-.23	.08	-.07	.31	.05
T	-.12	-.17	.06	-.14	.35	.04

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[1] This information was not available for some subjects.

[2] The following abbreviations for the social competency subscales and total score are utilized in this report: SH=Self Help, IR= Initiative-Responsibility, SS=Social Skills, C=Communication and T=Total Score.

TABLE 3:1b

CORRELATION (PEARSON r) BETWEEN SOCIAL COMPETENCY CHANGE SCORES AND INITIAL CHRONOLOGICAL AGE, MENTAL AGE AND INTELLIGENCE QUOTIENT FOR INSTITUTIONAL CONTROL AND EXPERIMENTAL GROUPS

	CA		MA		IQ	
	Cont.	Exp.	Cont.	Exp.	Cont.	Exp.
N	33	40	33	40	33	40
SH	-.07	-.34	.12	-.05	.24	.05
IR	-.10	-.08	.03	.13	.10	.07
SS	-.02	-.13	.04	-.06	.04	.02
C	-.12	.07	.02	.03	.07	-.15
T	-.09	-.18	.07	.02	.15	-.15

A. CONTROL AND EXPERIMENTAL GROUP COMPARISONS WITHIN THE COMMUNITY AND INSTITUTIONAL SETTINGS

Hypothesis 1. Trainable mentally retarded children living at home and attending public school classes will show greater increments in social competence than will a comparable group of children not attending such classes.

Tables 3:2 and 3:3 present the means, standard deviations, r's and t's of the initial and final social competency subscales and Total Score for the Community Control and Experimental Groups respectively. The final scores were significantly higher ($P < .01$) than the initial scores for the subscales and Total Score for both of these groups.

TABLE 3:2

MEANS AND STANDARD DEVIATIONS FOR INITIAL AND FINAL
SOCIAL COMPETENCY RATINGS, STABILITY
COEFFICIENTS (r) AND t TESTS FOR THE
COMMUNITY CONTROL GROUP
N=46

		Initial	Final	r	t
SH	Mean	61.76	67.07	.84	3.92**
	S.D	15.70	16.61		
IR	Mean	37.15	40.61	.86	3.65**
	S.D.	12.24	12.08		
SS	Mean	35.50	39.00	.82	4.56**
	S.D.	8.73	8.64		
C	Mean	51.57	54.85	.85	3.41**
	S.D.	11.81	11.98		
T	Mean	185.98	201.52	.88	5.05**
	S.D.	42.45	42.73		

** $P < .01$

TABLE 3;3

MEANS AND STANDARD DEVIATIONS FOR INITIAL AND FINAL SOCIAL COMPETENCY RATINGS, STABILITY COEFFICIENTS (r) AND t TESTS FOR THE COMMUNITY EXPERIMENTAL GROUP

N=63

		Initial	Final	r	t
SH	Mean	65.44	71.56	.76	5.79**
	S.D.	11.86	12.37		
IR	Mean	41.19	46.30	.70	5.54**
	S.D.	8.74	9.80		
SS	Mean	37.75	40.56	.65	3.77**
	S.D.	7.08	7.09		
C	Mean	53.27	55.84	.85	3.35**
	S.D.	10.88	11.10		
T	Mean	197.65	214.25	.76	6.23**
	S.D.	30.15	30.91		

**$p < .01$

Table 3:4 reports the means and standard deviations for the social competency change scores of the Community Control and Experimental Groups. The differences between the means of the change scores for the two community groups were nonsignificant. The hypothesis that trainable mentally retarded children attending public school classes will show significantly greater increments in social competence than will those not attending such classes was not substantiated.

In order to examine the possible differential rate of social competence development for the first and second experimental years, "midratings" were obtained at the conclusion of the first experimental year. The differences between the social competency change scores for these two time periods, as determined by _t_ tests, for both the community control and experimental groups were nonsignificant. It was concluded that there was no differential rate of social competency development for the community samples between the first and second experimental years.

TABLE 3:4

MEANS AND STANDARD DEVIATIONS OF SOCIAL COMPETENCY CHANGE SCORES FOR COMMUNITY CONTROL AND EXPERIMENTAL GROUPS

		Control N=46	Experimental N=63
SH	Mean	5.30	6.11
	S.D.	9.22	8.36
IR	Mean	3.46	5.11
	S.D.	6.44	7.30
SS	Mean	3.50	2.81
	S.D.	5.18	5.91
C	Mean	3.28	2.57
	S.D.	6.48	6.08
T	Mean	15.54	16.59
	S.D.	21.08	21.03

Hypothesis 2. Institutionalized trainable mentally retarded children attending school within the institution will show greater gains in social competence than will a comparable group of institutionalized children not attending the institutional school program.

Tables 3:5 and 3:6 present the means and standard deviations for the initial and final social competency ratings, the stability coefficients and the *t* tests for the Institutional Control and Experimental Groups respectively. The difference between the means of the initial social competency scores of the two institutional groups was not significant, with the exception of the Social Skills subscale, which was significant at the .05 level.

TABLE 3:5

MEANS AND STANDARD DEVIATIONS FOR INITIAL AND FINAL SOCIAL COMPETENCY RATINGS, STABILITY COEFFICIENTS (*r*), AND *t* TESTS FOR INSTITUTIONAL CONTROL GROUP
N=33

		Initial	Final	*r*	*t*
SH	Mean	53.73	52.94	.32	NS
	S.D.	17.43	17.74		
IR	Mean	32.27	28.82	.24	NS
	S.D.	13.01	11.97		
SS	Mean	27.24	23.15	.16	2.59*
	S.D.	7.81	6.04		
C	Mean	44.30	38.91	.59	2.37*
	S.D.	15.31	13.13		
T	Mean	157.55	143.94	.33	NS
	S.D.	47.13	40.76		

*$P < .05$

TABLE 3:6

MEANS AND STANDARD DEVIATIONS FOR INITIAL AND FINAL SOCIAL COMPETENCY RATINGS, STABILITY COEFFICIENTS (r), AND t TESTS FOR INSTITUTIONAL EXPERIMENTAL GROUP

N=40

		Initial	Final	r	t
SH	Mean	60.40	57.98	.35	NS
	S.D.	15.83	15.32		
IR	Mean	34.58	29.95	.38	2.40*
	S.D.	11.65	10.20		
SS	Mean	31.25	25.78	.34	4.31**
	S.D.	7.78	5.98		
C	Mean	45.82	43.08	.43	NS
	S.D.	12.57	13.10		
T	Mean	172.05	156.78	.46	2.38*
	S.D.	41.05	36.56		

* P<.05
** P<.01

The means of the final social competency subscale and Total Scores for both the Institutional Control and Experimental Groups were lower than the initial scores. This decrease was significant (P<.05) for the Social Skills and Communication subscales for the control group; whereas, for the experimental group, this decrease was significant for Social Skills (P<.01), for Initiative-Responsibility (P<.05) and Total Score (P<.05).

The means and standard deviations of the social competency change scores for the institutional groups are presented in Table 3:7. The differences between the change scores for the Institutional Control and Experimental Groups were nonsignificant for the subscales and the Total

Score. The hypothesis that school attendance within the institution will lead to significantly greater increments in social competence than not attending such programs was not substantiated.

TABLE 3:7

MEANS AND STANDARD DEVIATIONS OF SOCIAL COMPETENCY CHANGE SCORES FOR INSTITUTIONAL CONTROL AND EXPERIMENTAL GROUPS

		Control N=33	Experimental N=40
SH	Mean	-.79	-2.42
	S.D.	19.66	17.71
IR	Mean	-3.45	-4.62
	S.D.	15.44	12.20
SS	Mean	-4.09	-5.48
	S.D.	9.08	8.02
C	Mean	-5.39	-2.75
	S.D.	12.37	13.74
T	Mean	-13.61	-15.23
	S.D.	51.23	40.46

Discussion:

There were no significant differences between the means of the change scores of the control and experimental groups within the community and institutional settings. The prediction of greater social competency changes in favor of the school group over the nonschool group was based on the expectation that the school programs were explicitly geared to developing social competence. Considerable data were obtained from both the community and institutional schools in order to determine the validity of this assumption. An analysis of the school programs attended by the Community and Institutional Experimental Groups is presented in Chapter Five.

The correlations between the initial and final social competency scores for the community and institutional subjects were reported in Tables 3:2, 3:3, 3:5 and 3:6. These stability coefficients for the community groups (median r = .83) were markedly higher than the coefficients for the institutional groups (median r = .34) The low stability coefficients for the institutional groups suggest (1) low reliability of the ward technicians' ratings, or (2) considerable differential rates of social competency change for institutional children. In order to examine the former, test-retest reliability over a period of one month for thirty randomly selected institutional subjects yielded reliability coefficients of:

	r
Self Help	.80
Initiative-Responsibility	.69
Social Skills	.59
Communication	.65
Total	.79

These correlations are considerably higher than the stability coefficients, and suggest that the latter are not solely due to unreliability of technician ratings, but rather, may be due in part to differential growth rates of the children.

Because of the high stability coefficients of the mother ratings, test-retest data on the final social competency scores were not obtained.

Undoubtedly, test-retest comparisons would have produced reliability coefficients of at least the magnitude of the stability coefficients that were obtained over a two-year interval.

As an indication of the reliability of parent ratings, initial and final social competency ratings were obtained from mothers and fathers of 61 community subjects. The reliability coefficients for these ratings are presented in Table 3:8.

TABLE 3:8

RELIABILITY COEFFICIENTS (PEARSON *r*) FOR MOTHER AND FATHER INITIAL AND FINAL SOCIAL COMPETENCY RATINGS
N=61

	Initial	Final
SH	.83	.80
IR	.79	.69
SS	.79	.76
C	.81	.80
T	.85	.80

B. CONTROL AND EXPERIMENTAL GROUP COMPARISONS BETWEEN THE COMMUNITY AND INSTITUTIONAL SETTINGS.

There are two major difficulties in making comparisons between community and institutionalized retarded children. First, it is doubtful that the frames of reference of mothers and ward technicians are comparable. The interest and feeling for a particular child and the amount of observational time relative to each child's development on the part of the ward technician are quite different from that of the mother. The use of such terms as "parent surrogate" to describe the ward personnel does not alter these differences. Although the frames of reference of a parent and a ward technician may conceivably differ, a comparison of change scores is permissible, providing both individuals have had sufficient opportunity to observe the behaviors in question. Also, that within a particular situation and from a particular group's frame of reference (i.e., mothers, technicians, teachers, psychologists) reliable ratings are obtained. These points are made in order to sensitize the reader to the differing nature of the raters in the community and institutional settings.

The second difficulty relates to the comparability of community and institutionalized children on the criterion measure of social competence. The institutional admission policies give high priority to (1) the more severely retarded and physically involved children as well as those who present social problems, and (2) the children who come from homes which show evidence of family disintegration, poor mental health or present a community problem. Selecting children from the community and institutional settings within the limits of the study criteria, therefore, does not insure the comparability of the groups on the criterion measure of social competence.

In order to determine the comparability of the Community and Institutional Control and Experimental Groups on initial social competency scores, analyses of variance were performed across the four groups for each subscale and the Total Score. These data are reported in Table 3:9. All of the F ratios were significant beyond the .01 level, indicating that the groups are not comparable on initial social competency scores.

TABLE 3:9

ANALYSES OF VARIANCE OF INITIAL SOCIAL COMPETENCY SCORES FOR THE COMMUNITY AND INSTITUTIONAL CONTROL AND EXPERIMENTAL GROUPS

		Community		Institution		
		Control N=46	Experimental N=63	Control N=33	Experimental N=40	F
SH	Mean	61.76	65.44	53.73	60.40	4.58**
	S.D.	15.70	11.86	17.43	15.83	
IR	Mean	37.15	41.19	32.27	34.58	5.55**
	S.D.	12.24	8.74	13.01	11.65	
SS	Mean	35.50	37.75	27.24	31.25	15.28**
	S.D.	8.73	7.08	7.81	7.78	
C	Mean	51.57	53.27	44.30	45.82	5.48**
	S.D.	11.81	10.88	15.31	12.57	
T	Mean	185.98	197.65	157.55	172.05	8.61**
	S.D.	42.45	30.15	47.13	41.05	

** P < .01

The difference between the initial social competency scores of the community and institutional groups were tested by t tests. All of the t tests were significant (P < .01) for the subscale and Total Score comparisons, with the exception of the Self-Help subscale for the Community and Institutional Experimental Groups, which was not significant. The fact that there are significant differences between the initial social competency scores of the community and institutional groups does not prevent direct comparisons between the social competency change scores of these groups. This is so because the variables of CA, MA and IQ, which may conceivably effect the rate of social competency change, are not correlated with the rate of social competency change (see Tables 3:1a and 3:1b). Further, the differences of the change scores between the community and institutional groups are sufficiently great (see Tables 3:4 and 3:7) so as to preclude the necessity for utilizing a more powerful statistical technique, such as covariance analysis, which would only increase the probability of detecting differences between the groups.

Hypothesis 3. Trainable mentally retarded children living at home and attending public school classes will show greater increases in social competence than will institutional trainable retarded, whether or not they attend school within the institution.

The _t_ tests between the means of the social competency change scores for the Community and Institutional Experimental Groups are reported in Table 3:10. The _t_ tests, for all comparisons, were significant beyond the .01 level with the exception of the Communication subscale, which was significant at the .05 level.

The _t_ tests between the means of the social competency change scores for the Community Experimental and Institutional Control Groups are reported in Table 3:11. The _t_ tests, for all comparisons, were significant beyond the .01 level.

It was concluded that trainable mentally retarded children living at home and attending public school classes show significantly greater increases in social competence than institutionalized trainable mentally retarded children, regardless of whether or not they attend school.

TABLE 3:10

MEANS, STANDARD DEVIATIONS AND t TESTS OF CHANGE SCORES FOR COMMUNITY AND INSTITUTIONAL EXPERIMENTAL GROUPS

		Community N=63	Institution N=40	t
SH	Mean	6.11	-2.42	2.85**
	S.D.	8.36	17.71	
IR	Mean	5.11	-4.62	4.55**
	S.D.	7.30	12.20	
SS	Mean	2.81	-5.48	5.65**
	S.D.	5.91	8.02	
C	Mean	2.57	-2.75	2.31**
	S.D.	6.08	13.74	
T	Mean	16.59	-15.28	4.60**
	S.D.	21.03	40.46	

**$P < .01$

TABLE 3:11

MEANS, STANDARD DEVIATIONS AND t TESTS OF CHANGE SCORES FOR COMMUNITY EXPERIMENTAL AND INSTITUTIONAL CONTROL GROUPS

		Community Experimental N=63	Institution Control N=33	t
SH	Mean	6.11	-.79	NS
	S.D.	8.36	19.66	
IR	Mean	5.11	-3.45	3.01**
	S.D.	7.30	15.44	
SS	Mean	2.81	-4.09	3.95**
	S.D.	5.91	9.08	
C	Mean	2.57	-5.39	3.48**
	S.D.	6.08	12.37	
T	Mean	16.59	-13.61	3.25**
	S.D.	21.03	51.23	

**$P < .01$

Hypothesis 4. Trainable mentally retarded children living at home and not attending school will show greater gains in social competence than will institutionalized trainable retarded children regardless of whether or not they attend school.

The Institutional Control and Institutional Experimental Groups each were compared with the Community Control Group in terms of the amount of social competency change over the two-year period. The means of the change scores for the Community Control Group were significantly higher than those of the Institutional Experimental Group for the subscales and Total Score (P<.01) with the exception of the Self Help comparison, which was significant beyond the .05 level. These data are presented in Table 3:12.

TABLE 3:12

MEANS, STANDARD DEVIATIONS AND t TESTS OF CHANGE SCORES FOR COMMUNITY CONTROL AND INSTITUTIONAL EXPERIMENTAL GROUPS

		Community Control N=46	Institutional Experimental N=40	t
SH	Mean	5.30	-2.42	2.48*
	S.D	9.22	17.71	
IR	Mean	3.46	-4.62	4.19**
	S.D.	6.44	12.20	
SS	Mean	3.50	-5.48	7.08**
	S.D	5.18	8.02	
C	Mean	3.28	-2.75	5.55**
	S.D	6.48	13.74	
T	Mean	15.54	-15.28	4.33**
	S.D.	21.08	40.46	

* P < .05
** P < .01

The differences between the change scores of the Community and Institutional Control Groups were significant, with the exception of the Self Help subscale. The t tests between the social competency change scores are reported in Table 3:13.

TABLE 3:13

MEANS, STANDARD DEVIATIONS AND t TESTS OF CHANGE SCORES FOR COMMUNITY AND INSTITUTIONAL CONTROL GROUPS

		Community N=46	Institution N=33	t
SH	Mean	5.30	-.79	NS
	S.D.	9.22	19.66	
IR	Mean	3.46	-3.45	2.42*
	S.D.	6.44	15.44	
SS	Mean	3.50	-4.09	4.32**
	S.D.	5.18	9.08	
C	Mean	3.28	-5.39	3.68**
	S.D.	6.48	12.37	
T	Mean	15.54	-13.61	3.09**
	S.D.	21.08	51.23	

*P < .05
**P < .01

It is evident from these data that children remaining at home and not attending a school program show significantly greater increases in social competence than institutionalized children, regardless of whether or not they attend school. This finding was even more striking considering that institutionalized children as a group decreased in social competence over the two-year period.

Discussion:

State institutions, or extensions of institutions, have been suggested by some educators as the most efficacious way with which to deal with trainable children. According to the advocates of institutional programs, the personnel are trained in knowing how to care for these children and, therefore, have designed programs that are more effective than home care. Further, the trainable retarded child in an institution, unlike the child who lives in the community, is not exposed to the social stigma and psychological trauma because of his pronounced intellectual deficiency.

The dramatic difference in the direction of the social competency changes in the community and institutional children does not support these contentions. If the orientation of parents and community agencies toward the institution is in terms of training retarded children, rather than merely custodial care, the obvious conclusion based on the data presented herein is that this expectation is an illusion. There is no indication, based on the analysis of social competency data, that the institutional setting is beneficial to the development of trainable mentally retarded children. The lack of stimulation within the institution is apparently so pervasive that school attendance within this setting does not overcome its deleterious effects.

C. COMPARISONS BASED ON DIAGNOSTIC CLASSIFICATION AND SEX OF CHILDREN

As the tests of Hypotheses 1 and 2 indicated, there were no differences in the change scores between the experimental and control groups within either the community or the institutional settings. Therefore, the control and experimental groups were combined within these settings and the social competency change scores for the diagnostic and male-female categories were analyzed.

Analyses of variance of the subscale and Total Social Competency Change Scores for the diagnostic classifications of mongoloid, organic and undifferentiated were performed. The _F_ ratio for each analysis was nonsignificant for both the community and institutional groups. On the basis of these findings, it was concluded that there was no differential rate of social competency change among the diagnostic classifications.

The differences between the subscale and Total Social Competency Change Scores for males and females were tested by _t_ tests. For the community subjects, there was a significant difference ($P < .05$) favoring the males on the Initiative-Responsibility subscale. For the institutional subjects, there were significant differences ($P < .05$) favoring the females on both the Social Skills and Communication subscales.

II. ADAPTABILITY COMPARISONS FOR PARENTS OF SCHOOL VS. NON-SCHOOL CHILDREN

It was predicted that parents of children who attended school would increase in adaptability through contact with professional personnel in the school system. This contact would provide an opportunity for parents to better understand their children, become more sensitive to their needs and abilities and to learn new techniques and skills in raising their retarded children. The end result of these contacts should be an increase in parent adaptability.

Hypothesis 5. Parents of children attending public school classes in their communities will show greater increments in adaptability than will parents whose children do not attend such classes.

The analyses of the data relevant to this hypothesis was undertaken for mothers and fathers separately.

Tables 3:15 and 3:16 present the medians of the initial, final and change scores for the components and Total Adaptability scores for mothers and fathers of control and experimental subjects. In no instance was there an increase in the component of Total Adaptability Scores; therefore, Hypothesis 5 was not supported by these data. The relative positions of the four groups on the Total Adaptability Score remained the same from initial to final ratings, with the experimental mothers scoring highest followed by control mothers, experimental fathers and control fathers.

The significance of the difference between the initial and final component and Total Adaptability Scores for mothers and for fathers of the control and experimental subjects was tested by the Wilcoxon matched-pairs signed-ranks test. The significance levels for these comparisons are presented in Table 3:17. In all cases where the Wilcoxon test is significant, it reflects a decrease from initial to final scores.

TABLE 3:15

MEDIANS OF INITIAL, FINAL AND CHANGE SCORES FOR COMPONENTS AND TOTAL ADAPTABILITY FOR MOTHERS OF CONTROL AND EXPERIMENTAL SUBJECTS

	Control N=36			Experimental N=44		
	Initial	Final	Change	Initial	Final	Change
F[1]	2.12	2.17	.00	2.36	2.11	-.17
E	2.06	1.63	-.27	2.21	2.18	-.10
M	1.92	1.73	-.22	2.25	1.93	-.25
A	6.21	5.27	-.68	6.90	6.32	-.50

[1] The following abbreviations for the adaptability components and total score are utilized in this report: F=Flexibility, E=Empathy, M=Motivation and A=Adaptability Score.

TABLE 3:16

MEDIANS OF INITIAL, FINAL AND CHANGE SCORES FOR COMPONENTS AND TOTAL ADAPTABILITY FOR FATHERS OF CONTROL AND EXPERIMENTAL SUBJECTS

	Control N=31			Experimental N=38		
	Initial	Final	Change	Initial	Final	Change
F	2.25	1.83	-.54	2.07	2.04	-.05
E	2.18	1.15	-.54	2.06	1.78	-.30
M	1.54	1.53	-.11	1.88	1.60	-.20
A	5.86	4.96	-1.15	6.05	5.07	-.62

TABLE 3:17

SIGNIFICANCE VALUES OF WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST BETWEEN INITIAL AND FINAL COMPONENT AND TOTAL ADAPTABILITY SCORES FOR MOTHERS AND FATHERS OF CONTROL AND EXPERIMENTAL SUBJECTS

	Control		Experimental	
	Mothers N=36	Fathers N=31	Mothers N=44	Fathers N=38
F	NS	$P < .01$	NS	NS
E	$P < .05$	$P < .05$	NS	$P < .05$
M	NS	NS	$P < .01$	$P < .05$
A	$P < .05$	$P < .02$	NS	$P < .02$

The Motivation scores for both experimental mothers and fathers dropped significantly; whereas, the scores for control parents on this component were not statistically significant. However, the differences in the change scores, as tested by White's test, between the experimental and control mothers and experimental and control fathers were not significant. In fact, all comparisons employing the White's test between the change scores of the parent groups were nonsignificant for the component and Total Adaptability Scores.

Discussion:

The data are consistent with respect to the hypothesis that parents of trainable mentally retarded children attending public school classes will evidence greater increases in adaptability than will parents of children not attending such programs. Because every parent group decreased in their adaptability scores, it is concluded that the school programs did not have the salutory effect on parents that had been predicted.

The loss of over one adaptability level for control fathers suggests a change over the two-year period which has substantive import. It is concluded that control fathers, in the course of the experimental period, have become less specific and knowledgeable in their evaluation of their children's behavior and less inclined to be cognitively guided in responding to parent-child situations.

CHAPTER FOUR

PARENT ADAPTABILITY

The assessment of parent adaptability lends itself to the analysis of a number of relationships which, although extrinsic to the major hypotheses, contribute to an understanding of the parent-retarded child relationship. In the discussion which follows, parent adaptability will be analyzed in terms of the following: 1) mother-father adaptability differences, 2) the social competency development of trainable mentally retarded children, 3) children's age, sex, diagnostic classification and intelligence and 4) socio-economic status and other family variables. Although the relationships between parent adaptability and these variables are analyzed separately, this does not imply that the variables are necessarily independent of each other with regard to their effect on parent adaptability.

For most analyses the parents' adaptability scores were categorized as high, middle or low. This categorization made it possible to make certain generalizations about the parents in each of these groups. High adaptable parents are considered as those who employ cognitive guidance and are specific in defining parent-retarded child situations. Middle adaptable parents are those who respond in a routine manner, or react to situations in a stimulus-response fashion. Low adaptable parents tend to stereotype the parent-retarded child situation and respond in a rigid manner, or abrogate responsibility.

When it was necessary to utilize a directional test which took into account the magnitude of the ranks, the entire range of adaptability scores was used. Nonparametric statistics were used in all analyses in which parent adaptability scores were employed. In the analysis of children's social competency change scores, parametric statistics were used.

I. MOTHER-FATHER ADAPTABILITY DIFFERENCES

One of the most consistent patterns in this study were the differences which occurred between most comparisons of mothers' and fathers' adaptability. This section deals solely with the differences between mother and father ratings on adaptability. Subsequent sections of this chapter will be devoted to mother-father comparisons with such variables as children's development in social competence, sex, diagnostic classification, intelligence and age.

The findings indicate that mothers are more adaptable than fathers. The White's rank test for the significance of the difference between groups for mothers and fathers on the initial adaptability ratings, as presented in Table 4:1, was significant at the .05 level.

The difference between mothers and fathers was more pronounced for the final interview. As indicated in Table 4:2, this difference is significant beyond the .01 level. The differences in change scores between parents over the two-year study period, however, was not significant.

TABLE 4:1

FREQUENCY DISTRIBUTIONS, MEDIANS AND WHITE'S TEST ON INITIAL ADAPTABILITY RATINGS FOR MOTHERS AND FATHERS

Adaptability Ratings	Mothers N=80	Fathers N=69
12	1	2
11	4	
10	5	1
9	9	5
8	9	5
7	13	12
6	18	18
5	9	16
4	9	9
3	3	1
Median	6.65	5.97

White's test $\underline{z} = 1.93$, $\underline{P} < .05$

TABLE 4:2

FREQUENCY DISTRIBUTIONS, MEDIANS AND WHITE'S TEST ON FINAL ADAPTABILITY RATINGS FOR MOTHERS AND FATHERS

Adaptability Ratings	Mothers N=80	Fathers N=69
12		
11	3	
10	1	1
9	2	1
8	9	3
7	15	6
6	21	14
5	11	26
4	16	11
3	2	7
Median	6.23	5.11

White's test $\underline{z} = 2.68$, $\underline{P} < .01$

There were no significant differences between mothers and fathers on the components of Flexibility and Empathy for either the initial or final ratings. On the Motivation component, however, mothers scored significantly higher than fathers on the initial rating. As Table 4:3 indicates, the White's test yielded a z ratio of 3.11, which is significant beyond the .002 level.

TABLE 4:3

FREQUENCY DISTRIBUTION, MEDIANS AND WHITE'S TEST OF SIGNIFICANCE BETWEEN GROUPS FOR FATHERS AND MOTHERS ON INITIAL MOTIVATION

Motivation Ratings	Mothers N=80	Fathers N=69
4	20	4
3	5	2
2	36	37
1	19	26
Median	2.18	1.73

White's test $\underline{z} = 3.11$, $\underline{P} < .002$

Differences between parents' Motivation on the final interview were not significant. This latter finding reflects the comparatively greater losses in Motivation for mothers, as compared to fathers over the two-year study period. However, a comparison of Motivation change scores between mothers and fathers was not statistically significant.

On the basis of these data it was concluded that fathers of trainable retarded children are less adaptable than mothers of these children. The Motivation component appeared to be the major contributor to this difference.

II. PARENT ADAPTABILITY AND SOCIAL COMPETENCY DEVELOPMENT OF TRAINABLE RETARDED CHILDREN

The change scores derived from the difference between the children's initial and final ratings on the San Francisco Social Competency Scale were utilized as the criterion measure of the children's development. The initial adaptability ratings were used as the status measure for parents' adaptability and were considered as antecedents to children's changes in social competence. Initial ratings were chosen because they were not likely to be contaminated by the parents' participation in the study.

Implicit in the present research are two assumptions. The first is that the development of retarded children is subject to influence by the parent-child relationship. The second assumption is that parent adaptability is critical to the development of retarded children. The relationship between initial adaptability scores and the children's social competency change scores provided a test of both of these assumptions.

A. MOTHER ADAPTABILITY AND CHILDREN'S SOCIAL COMPETENCY CHANGE SCORES

In order to test the proposition that mothers' adaptability was related to gains in social competence, the social competency change scores for children whose mothers were rated high, middle and low on adaptability were analyzed by means of analysis of variance (F=2.95, df 2,77). This was not significant. However, because the F ratio approximated the .05 level, it seemed that further analysis was warranted.

When children's social competency change scores for high adaptable mothers were compared with the change scores of children of middle and low adaptable mothers combined, the children whose mothers were rated high showed significantly greater gains in social competence. Table 4:4 reports the means, standard deviations and the t test between the two groups of children. The difference was significant beyond the .025 level.

TABLE 4:4

MEANS, STANDARD DEVIATIONS AND t TEST BETWEEN SOCIAL COMPETENCY CHANGE SCORES FOR CHILDREN OF HIGHLY ADAPTABLE MOTHERS AND CHILDREN OF MIDDLE AND LOW ADAPTABLE MOTHERS

	Mother Adaptability		
	High N=28	Other (Middle and Low) N=52	t
Mean	22.50	11.96	2.21*
S.D.	20.60	19.77	

* $P < .025$ (one tail test)

These data indicate that children of high adaptable mothers have shown greater gains in social competence than children of middle and low adaptable mothers during the two-year study period.

It is possible that the relationship between mother adaptability and children's change scores is confounded by other variables. In order to explore this possibility, the data were examined to determine which variables, associated with mother adaptability, may have influenced the children's social competence development. The only variables found to be associated with mother adaptability which may confound it's relationship with children's change scores were children's intelligence and mothers' education. The discussions of the relationships between adaptability and children's I.Q. and mothers' education are relegated to later sections of this chapter. The present interest is solely in whether the association evidenced between adaptability and children's social competency change scores is a consequence of the relationship of these two variables with children's intelligence or mothers' education.

As reported in Table 3:1a, children's I.Q. and social competency change scores were not correlated. In addition, the gamma correlation between mothers' education and social competency change scores was only .18. Inasmuch as the variables of children's I.Q. and mothers' education were not associated with children's social competency change scores, it was concluded that the relationship of mother adaptability to children's change scores was not confounded by the association of these variables with mother adaptability.

Relationship of the Components of Adaptability with Children's Social Competency Change Scores

In order to test the relative influence of the components of Flexibility, Empathy and Motivation on trainable children's development, the relationship between children's social competency change scores and each component was determined. Analysis of variance of social competency change scores for children whose mothers were rated high, middle and low on the components, yielded nonsignificant results for Flexibility and Empathy. However, for Motivation, the analysis of variance was significant beyond the .05 level. In addition, *t* tests were significant for the change scores of children of high Motivation mothers vs. middle Motivation mothers and of high Motivation mothers vs. low Motivation mothers. The *t* test between the middle and low Motivation mothers, however, was not significant. Table 4:5 presents the relevant data. It appears, on the basis of this analysis, that Motivation is the prime contributor to the relationship of mother adaptability with children's gains in social competence.

TABLE 4:5

MEANS, STANDARD DEVIATIONS, ANALYSIS OF VARIANCE AND *t* TESTS BETWEEN SOCIAL COMPETENCY CHANGE SCORES FOR CHILDREN WHOSE MOTHERS ARE CATEGORIZED AS HIGH, MIDDLE AND LOW ON THE MOTIVATION SUBSCALE

	Mothers' Motivation			
	High *N*=25	Middle *N*=35	Low *N*=20	*F*
Mean	24.24	11.34	12.45	3.38*
S.D.	21.74	18.46	20.26	

High vs. Middle: *t*=2.41**

Middle vs. Low: *t*=NS

High vs. Low: *t*=1.88*

* *P* < .05 (one-tail test)

***P* < .01 (one-tail test)

B. FATHER ADAPTABILITY AND CHILDREN'S SOCIAL COMPETENCY CHANGE SCORES

The same procedures were employed in the analysis of the relationship between father adaptability and children's social competency change scores as those used with the mother comparisons. In no case was there a significant relationship between high, middle and low father adaptability and children's change scores. This also proved to be the case for the analyses of the component ratings. It was concluded on the basis of these findings that father adaptability is not related to change scores in children's social competence.

C. INFLUENCE OF THE FATHER ON MOTHER ADAPTABILITY AND THE CHILDREN'S DEVELOPMENT IN SOCIAL COMPETENCE

It is possible to conceive of mothers' adaptability as an antecedent variable and, therefore, a direct influence on the children's development in social competence. There is no evidence to support a similar conclusion with regard to fathers. Although fathers may not be as influential as mothers in determining the course of the child's development, they may have an indirect effect upon mothers and, therefore, influence the child's development.

Two aspects of this influence were assessed and are reported to add empirical evidence in support of the notion that the father's effect on the child tends to be indirect.

In the interviews, parents were asked how much time fathers spent with their children. The assumption was that the father who plays a more active role with the retarded child would make a greater contribution to family cohesion than the less active father. If this is true, some of the strain on the mother may be relieved; the child may function as an integral family member; and the mother may be freer and, therefore, more reflective and adaptable in her child rearing practices. To test this assumption regarding the mothers' adaptability, fathers' responses to the question, "How much time do you spend with your child?" were categorized by the number of hours a week spent with the child. This was then correlated with mother adaptability. Table 4:6 presents the gamma correlations between these two variables. The correlations between the time the fathers spend with their retarded children and mothers' Empathy, Motivation and Total Adaptability were statistically significant. It is of interest that the time fathers spend with their children correlated most highly with mother Motivation; the component which was most related to children's social competency development.

TABLE 4:6

CORRELATIONS (GAMMA) OF MOTHERS' ADAPTABILITY RATINGS WITH HOURS PER WEEK FATHERS SPEND WITH THE CHILD

N=65

	Gamma
Flexibility	.12
Empathy	.40*
Motivation	.46*
Adaptability	.39*

*$P < .05$

Paternal influence on children's development in social competence was assessed by comparing change scores of children whose fathers were present in the home with those whose fathers were absent. There were 15 families in the study in which the father was not living at home. The reasons for the fathers' absence varied from death and divorce to imprisonment. Table 4:7 presents the means, standard deviations and the _t_ test for children's change scores in social competence for children whose fathers were out of the home, as compared to those whose fathers were present. The social competency change scores for children of fathers at home were significantly greater than for children whose fathers were not in the home. Therefore, it was concluded that the fathers' presence in the home influenced the children's development.

TABLE 4:7

MEANS, STANDARD DEVIATIONS AND t TESTS BETWEEN SOCIAL COMPETENCY CHANGE SCORES FOR CHILDREN WHOSE FATHERS WERE PRESENT IN THE HOME AND CHILDREN WHOSE FATHERS WERE ABSENT FROM THE HOME

	Fathers Present in Home _N_=67	Fathers Absent From Home _N_=15	_t_
Mean	17.91	6.66	2.76**
S.D.	21.65	13.14	

**_P_ $<$ .01

III. THE RELATIONSHIP OF PARENT ADAPTABILITY WITH CHILDREN'S SEX, DIAGNOSTIC CLASSIFICATION, INTELLIGENCE AND CHRONOLOGICAL AGE

A. PARENT ADAPTABILITY AND SEX OF CHILDREN

Based on the theory of adaptability discussed earlier in this report, the prediction was made that parents of the same-sex child[1] would have a greater range of adaptability scores than parents of children of the opposite sex. This was based on the assumption that mothers and fathers were likely to be more identified with the same-sex child, therefore, likely to be more sensitive to their behavior problems. It was predicted that, in those cases where the children's behaviors were perceived as problematic, the parents' responses would not be routine but, depending upon the parents' ability and motivation, would be either oriented to problem solving (high adaptable) or be rigid and stereotyped (low adaptable). Therefore, if the parents of the same-sex child are more inclined to see such children's behavior as problematic, it would be expected that there would be greater variability in the adaptability ratings for mothers of girls and fathers of boys than for mothers of boys and fathers of girls. The data support these predictions for fathers but not for mothers. From Table 4:8 it can be seen that 59% of the fathers of girls were categorized as "middle" adaptable as compared to 29% of the fathers of boys. In addition, 29% of the fathers of boys were rated "high" adaptable as compared to only 9% of the fathers of girls. The chi square test for these data was significant beyond the .05

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[1] The term "same-sex child" is used here to indicate sons of fathers and daughters of mothers.

level.

TABLE 4:8

FREQUENCIES, PERCENTAGES AND CHI SQUARE TEST OF HIGH, MIDDLE AND LOW ADAPTABILITY RATINGS FOR FATHERS OF BOYS AND FATHERS OF GIRLS

Adaptability Ratings	Fathers of Boys *N*=35	Fathers of Girls *N*=34
High	(10) 29%	(3) 9%
Middle	(10) 29%	(20) 59%
Low	(15) 44%	(11) 32%

Chi square = 2.69, *df* = 2, $P < .05$

A similar comparison between mothers of boys and mothers of girls was not statistically significant.

The conclusion that the children's sex is more likely to influence fathers' adaptability than mothers' adaptability is further supported by comparing mothers of boys with fathers of boys, and mothers of girls with fathers of girls. There were no significant differences between the distributions of adaptability ratings for mothers and fathers of boys. However, as indicated in Table 4:9, the difference between mothers and fathers of girls was significant beyond the .02 level. This was due to the restricted range of adaptability scores of fathers of girls.

TABLE 4:9

FREQUENCIES, PERCENTAGES AND CHI SQUARE TEST OF HIGH, MIDDLE AND LOW ADAPTABILITY RATINGS FOR MOTHERS AND FATHERS OF GIRLS

Adaptability Ratings	Mothers N=39	Fathers N=34
High	(15) 38%	(3) 9%
Middle	(15) 38%	(20) 59%
Low	(9) 23%	(11) 32%

Chi square = 8.60, df=2, $P < .02$

Adaptability Components and Sex of Children

It appears from the analyses of the components that Motivation is the chief contributor to the adaptability differences noted above. None of the comparisons for Empathy and Flexibility were statistically significant; however, fathers of boys differed significantly from fathers of girls on Motivation. Table 4:10 presents the frequencies and percentages of ratings for fathers of boys compared to ratings for fathers of girls on Motivation. The chi square test for these data was significant beyond the .02 level. Seventy-one percent of the fathers of girls were rated at the 2 level, which is the level of Motivation characterized by routine and unreflective responses. No fathers of girls were rated high (levels 3 and 4) on Motivation. The difference in Motivation ratings between mothers of boys and mothers of girls was not statistically significant.

TABLE 4:10

FREQUENCIES, PERCENTAGES, MEDIANS AND CHI SQUARE TEST OF MOTIVATION RATINGS FOR FATHERS OF BOYS AND FATHERS OF GIRLS

Motivation Ratings	Fathers of Boys N=35	Fathers of Girls N=34
4	(5) 14%	
3	(2) 6%	
2	(13) 37%	(24) 71%
1	(15) 43%	(10) 29%
Median	1.73	1.79

Chi square = 11.26, df = 3, $P < .02$

As reported in Table 4:11, mothers and fathers of girls differ significantly on Motivation. No such difference exists for parents of boys.

On the basis of these data, it was concluded that fathers of boys are more variable in Motivation than fathers of girls. For mothers it appears that the children's sex has little influence on their Motivation. Finally, for both Motivation and Total Adaptability, the greater variances of scores for fathers of boys tends to make their ratings comparable to that of mothers; whereas, the restricted range of scores for fathers of girls tends to increase mother-father differences.

TABLE 4:11

FREQUENCIES, PERCENTAGES, MEDIANS AND CHI SQUARE TEST OF MOTIVATION RATINGS FOR MOTHERS AND FATHERS OF GIRLS

Motivation Ratings	Mothers *N*=39	Fathers *N*=34
4	(13) 33%	
3	(1) 2%	
2	(16) 41%	(24) 71%
1	(9) 23%	(10) 29%
Median	2.19	1.79

Chi square = 13.77, *df* = 3, $P < .01$

B. PARENT ADAPTABILITY AND CHILDREN'S DIAGNOSTIC CLASSIFICATION

One of the attributes of a child's diagnostic classification which may affect the adaptability of his parents is his physical appearance. Other possible attributes which may influence parent adaptability are the children's mental ability and gross physically disabling conditions. Children with extreme physical handicaps were excluded from the study because they didn't meet the criteria of eligibility of public school programs. Evidence reported earlier indicated no significant differences between the diagnostic classifications for initial intelligence test scores or initial social competency scores. Physical appearance, therefore, appears to be the remaining child attribute which may be related to parent adaptability. Of the three diagnostic classifications used in this study, (i.e., mongoloid, organic and undifferentiated) the mongoloid child's physical appearance offers the most obvious indication that he is intellectually handicapped. If parent adaptability is affected by children's physical appearance, then parents of mongoloid children should be less adaptable than parents of children diagnosed as organic or undifferentiated.

This prediction was supported for fathers but not for mothers. There was no significant difference between the adaptability scores of mothers of mongoloids compared to mothers of nonmongoloids. However, the difference between adaptability ratings of fathers of mongoloid children and fathers of nonmongoloid children was statistically significant. Table 4:12 presents the frequencies and percentages for the categories of high, middle and low adaptable fathers of mongoloid children as compared to fathers of nonmongoloid children. The chi square test for these data was significant beyond the .05 level.

Table 4:13 presents the frequency distributions, medians and the White's test for the range of adaptability scores for fathers of mongoloids and fathers of nonmongoloids. The White's test yielded a $\underline{z}$ ratio of 1.98, which is significant beyond the .05 level. On the basis of these data, it was concluded that fathers of mongoloid children are less adaptable than fathers of nonmongoloid children.

No significant differences were found between parents' scores on any of the components for parents of mongoloids versus parents of nonmongoloids.

TABLE 4:12

FREQUENCIES, PERCENTAGES AND CHI SQUARE TEST OF HIGH, MIDDLE AND LOW ADAPTABILITY RATINGS FOR FATHERS OF MONGOLOIDS AND FATHERS OF NONMONGOLOIDS

Adaptability Ratings	Fathers of Mongoloids N=31	Fathers of Non-Mongoloids N=38
High	(2) 6%	(11) 29%
Middle	(13) 42%	(17) 45%
Low	(16) 52%	(10) 26%

Chi square = 7.50, *df* = 2, *P* $< .05$

TABLE 4:13

FREQUENCIES, MEDIANS AND WHITE'S TEST OF ADAPTABILITY RATINGS FOR FATHERS OF MONGOLOIDS AND FATHERS OF NONMONGOLOIDS

Adaptability Ratings	Fathers of Mongoloids N=31	Fathers of Non-Mongoloids N=38
12		2
11		
10		1
9		4
8	2	4
7	7	6
6	6	11
5	12	4
4	3	6
3	1	
Median	5.42	6.31

White's test *z* = 1.98, *P* $< .05$

Inasmuch as the children's intelligence and social competence were not related to their diagnostic classification, it is likely that the lower adaptability scores of fathers of mongoloids was a consequence of their children's physical appearance rather than differences in ability.

C. PARENT ADAPTABILITY AND CHILDREN'S INTELLIGENCE

In the two preceeding sections adaptability scores were analyzed in terms of the affect of such nonability factors as the children's sex and diagnostic classification. In this section the relationship between parent adaptability and the children's intelligence are reported. The intelligence of the child is an ability factor which can conceivably affect every interaction with parents and, therefore, is fundamental to the parent-retarded child relationship.

Based on previous findings, it was concluded that mothers' adaptability scores were not affected by children's nonability factors; whereas, fathers' adaptability scores were influenced by these factors. On the other hand, there was a relationship between mother adaptability and the children's social competence, which is an ability measure. No such relationship existed for fathers.

By employing the conception of ability and nonability factors it can be predicted, based on the above findings, that children's intelligence (an ability factor) is related to mothers' adaptability and not to fathers' adaptability. In order to test this prediction the distribution of the intelligence test scores of children were dichotomized at the median

I.Q. of 38, producing "high" and "low" groups. As presented in Tables 4:14 and 4:15, only 8% of the mothers of children with "high" I.Q.'s were in the low adaptability category; whereas, 46% of the mothers of children with "low" I.Q.'s were in this category. The chi square test for mothers was significant beyond the .001 level. The data presented for fathers in Table 4:15 show that, although fathers of "low" I.Q. children tend to score lower than fathers of "high" I.Q. children, the difference was not significant.

The White's test between the distributions of adpptability ratings for mothers of "high" I.Q. children and mothers of "low" I.Q. children yielded a z ratio of 4.03, which was significant beyond the .001 level. On the basis of this finding, it was concluded that mothers of "high" I.Q. children are more adaptable than mothers of less intelligent children.

TABLE 4:14

FREQUENCIES, PERCENTAGES AND CHI SQUARE TEST OF HIGH, MIDDLE AND LOW ADAPTABILITY RATINGS FOR MOTHERS OF "HIGH" I.Q. CHILDREN (I.Q. 39-55) AND MOTHERS OF "LOW" I.Q. CHILDREN (I.Q. BELOW 39)[1]

Adaptability Ratings	Mothers of "High" I.Q. Children N=39	Mothers of "Low" I.Q. Children N=39
High	(19) 49%	(9) 23%
Middle	(17) 43%	(12) 31%
Low	(3) 8%	(18) 46%

Chi square = 14.77, df = 2 P $<$ .001

[1] I.Q. data not available for two subjects

TABLE 4:15

FREQUENCIES, PERCENTAGES AND CHI SQUARE TEST OF HIGH, MIDDLE AND LOW ADAPTABILITY RATINGS FOR FATHERS OF "HIGH" I.Q. CHILDREN (I.Q. 39-55) AND FATHERS OF "LOW" I.Q. CHILDREN (I.Q. BELOW 39)

Adaptability Ratings	Fathers of "High" I.Q. Children N=36	Fathers of "Low" I.Q. Children N=31
High	(8) 22%	(4) 13%
Middle	(18) 50%	(11) 35%
Low	(10) 28%	(16) 52%

Chi square = 4.06, df = 2, $P < .20$

The prediction that mothers' adaptability ratings would be affected more by the level of the children's intelligence than the father adaptability ratings was further supported by the analysis of parents ratings on the components. There were no significant differences on any of the components for fathers. However, as indicated in Tables 4:16, 4:17 and 4:18, mothers of "high" I.Q. children score significantly higher than mothers of "low" I.Q. children on each of the three components.

It is of interest that this was the only analysis in which the Flexibility and Empathy components yielded significant results. This suggests that, if the child is sufficiently responsive, the mothers' use of different approaches in dealing with the youngster is facilitated, and her understanding of the child is enhanced.

TABLE 4:16

FREQUENCIES, MEDIANS AND WHITE'S TEST OF FLEXIBILITY RATINGS FOR MOTHERS OF "HIGH" I.Q. CHILDREN (I.Q. 39-55) AND MOTHERS OF "LOW" I.Q. CHILDREN (I.Q. BELOW 39)

Flexibility Ratings	Mothers of "High" I.Q. Children N=39	Mothers of "Low" I.Q. Children N=39
4	4	2
3	19	4
2	15	27
1	1	6
Median	2.63	2.00

White's test $z = 3.89$, $P < .001$

TABLE 4:17

FREQUENCIES, MEDIANS AND WHITE'S TEST OF EMPATHY RATINGS FOR MOTHERS OF "HIGH" I.Q. CHILDREN (I.Q. 39-55) AND MOTHERS OF "LOW" I.Q. CHILDREN (I.Q. BELOW 39)

Empathy Ratings	Mothers of "High" I.Q. Children N=39	Mothers of "Low" I.Q. Children N=39
4	3	
3	17	7
2	15	21
1	4	11
Median	2.53	1.90

White's test $z = 3.25$, $P < .001$

TABLE 4:18

FREQUENCIES, MEDIANS AND WHITE'S TEST OF MOTIVATION RATINGS FOR MOTHERS OF "HIGH" I.Q. CHILDREN (I.Q. 39-55) AND MOTHERS OF "LOW" I.Q. CHILDREN (I.Q. BELOW 39)

Motivation Ratings	Mothers of "High" I.Q. Children N=39	Mothers of "Low" I.Q. Children N=39
4	14	6
3	4	1
2	16	17
1	5	15
Median	2.41	1.76

White's test $z = 3.03$, $P < .025$

D. PARENT ADAPTABILITY AND CHILDREN'S CHRONOLOGICAL AGE

Chronological age can be considered as a nonability factor. It is analogous to the child's sex and diagnostic classification in that it classified the child by a criterion extrinsic to his functioning and ability. Although mother adaptability was not associated with these two nonability factors, it was significantly associated with chronological age. Table 4:19 presents the frequency distributions and medians of adaptability ratings for mothers of younger children and mothers of older children. White's test between these distributions was significant beyond the .02 level. These data indicate that mothers of younger children are more adaptable than mothers of older children. No significant difference was found when this comparison was made for fathers.

TABLE 4:19

FREQUENCY DISTRIBUTIONS, MEDIANS AND WHITE'S TEST OF ADAPTABILITY RATINGS FOR MOTHERS OF YOUNGER CHILDREN (C.A. 60-101) AND MOTHERS OF OLDER CHILDREN (C.A. 102 AND ABOVE)

Adaptability Ratings	Mothers of Younger Children N=40	Mothers of Older Children N=40
12	1	
11	2	2
10	4	1
9	5	4
8	4	5
7	9	5
6	10	7
5	3	6
4	2	7
3		3
Median	7.05	6.07

White's test $z = 2.40$, $P < .02$

A characteristic of the present sample is that younger children tend to be those with higher intelligence scores: the correlation (Pearson r) between age and I.Q. was -.22. This relationship was a consequence of the criteria for selecting study subjects. Because only children starting school, or eligible to start school, were selected for the study, there was a tendency for more intelligent children to be included in the study at an earlier age than less intelligent children. This inverse relationship, although not high, suggests that the obtained relationship between mothers' adaptability and children's age may be confounded by the relationship between mothers' adaptability and children's I.Q. In order to test this possibility, mother adaptability was analyzed with each of the variables of children's age and intelligence in turn, holding the other variable constant. For example, if the association of mother adaptability and children's I.Q. remains, holding age constant, and, if the association of mother adaptability and children's age disappears when intelligence is held constant, then it can be concluded that the obtained relationship between mothers' adaptability and children's age is spurious.

In order to utilize chi square to test these possibilities, mothers' adaptability ratings were dichotomized into high adaptability (scores 7 and above) and low adaptability (scores below 7).

It can be seen from Table 4:20 that the relationship between adaptability and I.Q. was statistically significant for mothers of younger children, as well as for mothers of older children. On the other hand, as presented in Table 4:21, when I.Q. is held constant, the relationship between mother adaptability and children's age disappears. On the basis of these findings, it was concluded that there is a relationship between mothers' adaptability and children's I.Q.; whereas, the relationship that was obtained between mothers' adaptability and children's age was spurious.

TABLE 4:20

FREQUENCIES, PERCENTAGES AND CHI SQUARE TESTS OF HIGH AND LOW ADAPTABILITY RATINGS FOR MOTHERS OF "HIGH" I.Q. CHILDREN (I.Q. 39-55) AND MOTHERS OF "LOW" I.Q. CHILDREN (I.Q. BELOW 39) WITHIN THE YOUNGER GROUP OF CHILDREN (C.A. 60-101) AND THE OLDER GROUP OF CHILDREN (C.A. ABOVE 102)

Adaptability Rating	Mothers of Younger Children		Mothers of Older Children	
	Mothers of High I.Q. Children N=23	Mothers of Low I.Q. Children N=15	Mothers of High I.Q. Children N=16	Mothers of Low I.Q. Children N=24
High	(17) 74%	(6) 40%	(11) 69%	(6) 25%
Low	(6) 26%	(9) 60%	(5) 31%	(18) 75%

Chi square=4.37, df=1, P < .05 for mothers of younger children, and
Chi square=7.52, df=1, P < .01 for mothers of older children

TABLE 4:21

FREQUENCIES, PERCENTAGES AND CHI SQUARE TESTS OF HIGH AND LOW ADAPTABILITY RATINGS FOR MOTHERS OF YOUNGER CHILDREN (C.A. 60-101) AND MOTHERS OF OLDER CHILDREN (C.A. ABOVE 102) WITHIN THE "HIGH" I.Q. GROUP OF CHILDREN (I.Q. 39-55) AND THE "LOW" I.Q. GROUP OF CHILDREN (I.Q. BELOW 39)

Adaptability Rating	Mothers of Children With "High" I.Q.s		Mothers of Children With "Low" I.Q.s	
	Mothers of Younger Children N=25	Mothers of Older Children N=17	Mothers of Younger Children N=12	Mothers of Older Children N=24
High	(17) 68%	(12) 71%	(5) 42%	(6) 25%
Low	(8) 32%	(5) 29%	(7) 58%	(18) 75%

Chi square tests were nonsignificant

IV. PARENT ADAPTABILITY WITH SOCIO-ECONOMIC AND FAMILY VARIABLES

The emphasis in this section will be on those factors in the parents' environment which may influence their adaptability exclusive of the retarded child and the parent-retarded child relationship.

A. PARENT ADAPTABILITY AND SOCIO-ECONOMIC VARIABLES

Very few of the parents participating in this study could be categorized as upper class in the generally accepted meaning of the term. Rather, the upper end of the distributions of occupational prestige and income represented by these parents could be considered, for the most part, as middle class. Correlations were computed for the socio-economic variables of education, occupational prestige and income with parents' adaptability and with the components of Flexibility, Empathy and Motivation. Tables 4:22 and 4:23 present the correlations for mothers and fathers respectively. In comparing the two tables it can be seen that the socio-economic variables are more highly associated with fathers' ratings than they are with mothers' ratings.

Adaptability ratings are more highly correlated with education than with any of the other socio-economic variables for both mothers and fathers. For mothers, it was the only variable which was significantly correlated with adaptability and with the components.

TABLE 4:22

CORRELATIONS (GAMMA) OF MOTHERS' RATINGS ON FLEXIBILITY, EMPATHY, MOTIVATION AND TOTAL ADAPTABILITY WITH THE SOCIO-ECONOMIC VARIABLES OF MOTHERS' EDUCATION, FATHERS' OCCUPATIONAL PRESTIGE AND FAMILY INCOME

	Mothers' Education N=78[1]	Occupational Prestige N=80	Family Income N=80
F	.38*	.14	.11
E	.27*	.07	.14
M	.27*	.07	.10
T	.27*	.07	.11

* $P < .05$

[1] This information was not available for two mothers.

TABLE 4:23

CORRELATIONS (GAMMA) OF FATHERS' RATINGS ON FLEXIBILITY, EMPATHY, MOTIVATION AND TOTAL ADAPTABILITY WITH THE SOCIO-ECONOMIC VARIABLES OF FATHERS' EDUCATION,
SOCIO-ECONOMIC VARIABLES OF FATHERS' EDUCATION,
FATHERS' OCCUPATIONAL PRESTIGE AND FAMILY INCOME

N=69

	Fathers' Education	Occupational Prestige	Family Income
F	.48*	.51*	.26*
E	.26*	.08	.08
M	.21	.30*	.22
T	.32*	.27*	.21*

*$P < .05$

B. PARENT ADAPTABILITY AND PARENTS' AGE

The gamma correlation coefficients of parental age with adaptability and with the components are presented in Table 4:24. The relationships are low, although apparently younger fathers show some tendency to be higher on Flexibility, Empathy and Total Adaptability than older fathers.

TABLE 4:24

CORRELATIONS (GAMMA) OF MOTHER AND FATHER RATINGS ON FLEXIBILITY, EMPATHY, MOTIVATION AND TOTAL ADAPTABILITY WITH MOTHERS' AGE AND FATHERS' AGE

	N	Flexibility	Empathy	Motivation	Adaptability
Mothers' Age	80	-.09	-.07	-.12	-.10
Fathers' Age	69	-.27*	-.29*	-.08	-.25*

* P<.05

C. PARENT ADAPTABILITY AND NUMBER OF CHILDREN IN FAMILY AND ORDINAL POSITION OF RETARDED CHILD

Neither of these variables were significantly correlated with parent adaptability.

V. SUMMARY AND CONCLUSIONS

In this chapter, parent adaptability was examined in terms of its contribution to understanding the parent-retarded child relationship. Adaptability was analyzed in relation to a number of factors which can be considered critical to how the parent relates to his retarded child. These factors have been classified under four rubrics: 1) mother-father adaptability differences, 2) adaptability and children's development in social competence, 3) the relationship of adaptability with children's characteristics of age, sex, intelligence and diagnostic classification, and 4) the association of adaptability with variables relating to family and parent characteristics, such as socio-economic status, parents' age and size of family.

Mother-father differences in parent adaptability tend to pervade all of the analyses undertaken in this chapter. Not only do mothers rate significantly higher than fathers on adaptability, but the variables that are related to adaptability differ for mothers and fathers. For example, mother adaptability is associated with variables characteristic of children's abilities, such as development of social competence and intelligence. Father adaptability, on the other hand, is associated with variables which can be classified as nonability factors, such as diagnostic classification and sex.

The nonability factors tend to have associated with them certain expectations which are socially imposed. These expectations, which categorize the children in relation to the social structure, influence the father-child relationship, although they are unrelated to individual differences among these children. For example, fathers of mongoloids had significantly lower adaptability scores than fathers of children in the other diagnostic categories. The major attribute which differentiates mongoloids from the other diagnostic groups studied was physical appearance, rather than intelligence and physical handicaps. The mongoloid child's physical appearance is prima facie evidence of retardation. It is suggested that this societal categorization has a depressing effect on the adaptability of fathers of mongoloid children.

The sex of the retarded child also was associated with fathers' adaptability. The ratings of fathers of girls clustered around the middle of the adaptability range; whereas, fathers of boys had a much wider range of ratings. This finding is interpreted as indicating that the fathers' greater identification with boys contributed to the perception of boys' behavior as more problematic which, in turn, produced a greater range of adaptability ratings. Fathers of girls, on the other hand, may tend not to be as sensitive to their daughters' behavior, and, therefore, respond in a routine, unreflective manner.

The association of mother adaptability with children's gains in social competence suggested that mothers' adaptability had a direct influence on the retarded child's development. There was no evidence to support a similar inference for fathers. There was some evidence, however, which supported the contention that fathers had an indirect influence on mothers' adaptability and children's gains in social competence. The amount of time the father spent with his retarded child was significantly correlated with mother adaptability. In addition, when children with fathers in the home were compared with children whose fathers were not in the home, the former group showed signific-

antly greater gains in social competence.

Socio-economic status was associated with father adaptability to a greater degree than it was with mother adaptability. Of the three variables used as indices of socio-economic status (i.e., education, income and occupation), only education was significantly correlated with the adaptability of mothers; however, for fathers, all three variables were associated with adaptability. This finding further supports the generalization that father adaptability is much more sensitive to influences external to the parent-child relationship than is mother adaptability.

CHAPTER FIVE

SCHOOL DATA

The primary purpose of this study was to examine the effect of special educational classes for trainable mentally retarded children and to assess the role of these classes in the development of such children. The dearth of information in regard to the methods of organizing, planning and the carrying-out of classroom experiences for the trainable mentally retarded has been noted by Hudson (1958). The major difficulty in evaluating the effectiveness of school programs has been the lack of adequate external criteria for assessing the development of these children. Such criteria is necessary, not only for evaluating the differential behavioral changes in school children, but also for providing a basis for interpreting these changes between school and nonschool children.

The educational goals for the trainable retarded child are defined in terms of social competency behaviors. These goals are operationally defined in the items comprising the San Francisco Social Competency Scale which, for this study, was utilized as the criterion of change. These items do not cover the universe of social competency behaviors but represent a sample, selected as broadly as possible, of those social competency behaviors that met certain criteria of scaleability (see Appendix A).

In addition to the demographic information provided by the teachers and administrators, a number of procedures were employed in order to obtain data regarding the school programs.

1. Three classroom observations were conducted during the two-year experimental period during which study subjects were enrolled.
2. Each teacher provided initial and final social competency ratings for the children in the study.
3. A teacher adaptability interview, which paralleled the parent adaptability interview, was conducted with each teacher in the study.
4. A questionnaire was administered to the teachers, which solicited their evaluation of teacher training programs and the type of supervision that would be of most value to them. In addition, information was obtained regarding their conception of the schools' objectives in educating the trainable retarded child.

The above data yielded information regarding the public and institutional school programs, the development of trainable mentally retarded children, and the teachers' orientation to the education of these children. Data were obtained from thirty-one public school classes and four institutional school classes. Because only four classes in one state institution were involved, the analysis of the institutional school program was confined to the observational data, as it was not meaningful to analyze the responses to interviews for only four teachers.

I. DEMOGRAPHIC INFORMATION

The background information regarding the school programs and the teachers participating in this study was obtained by questionnaire and interview procedures. This information is reported separately for the public and institutional schools.

A. PUBLIC SCHOOL INFORMATION

Thirty-one teachers from six city and four county school districts in California participated in this study. The 63 experimental subjects were distributed among these teachers, ranging from one to eight subjects in a classroom[1], with approximately 25% of the teachers having just one study subject.

Most classes were operated in separate or segregated facilities with the trainable children having no contact with other children during the school day. Three city operated programs were located on the grounds of an elementary school and in all instances the children were assigned to a separate wing or section of the school. The facilities varied from completely new schools built specifically for these children to minimal facilities previously utilized for a regular elementary school program.

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[1] The California Administrative Code, Title 5, Education, Article 21, sets 12 as the maximum number that may be enrolled in a class for trainable mentally retarded children.

The percentage of time spent in supervision by principals, psychologists, special education coordinators, and others, of the classes in this study are presented in Table 5:1. Four of the ten districts maintained schools for trainable children with full time principals. In four instances, an elementary school principal devoted a portion of his time to the general supervision of these classes. In two instances,a designated teacher performed some supervisory function. School psychologists and special education coordinators spent some time in supervising programs, although their time may have overlapped with that of the principal. Much of the time of the psychologists and special education coordinators was spent in psychological testing, making determinations for admission and exclusion, and in general administrative details. Consultative services, particularly by psychologists, were generally available to the teachers as needed. Information regarding the teachers' conception of the role of the supervisor is presented in Section V of this chapter.

The California Administrative Code requires a minimum of 180 minutes per day, inclusive of recess; however, when a teacher has two sessions daily the minimum school day shall be 130 minutes, inclusive of recess. The length of the school day of the classes participating in this study ranged from 130 minutes to 300 minutes, with a median of 180 minutes. Three of the teachers taught double sessions of 130 minutes each.

TABLE 5:1

PERCENTAGE OF TIME AND TYPE OF SUPERVISION PROVIDED BY EACH DISTRICT

District	Principal	Psychologist	Special Education Coordinator	Other
1		17	12	30[1]
2	100			
3	100			
4		5	15	2[1]
5	40		33	15[2]
6		33		10[1]
7			35	10[1]
8	100			
9			20	15[2]
10	100			

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[1] Regular elementary school principal.

[2] Teachers performing supervisory functions.

1. Teacher Information

The California Administrative Code specifies that a teacher must obtain a valid basic teaching credential prior to the issuance of a special credential for teaching the mentally retarded. Inasmuch as the State of California issues one credential for teachers of the mentally retarded, teachers of trainable mentally retarded and teachers of educable mentally retarded receive the same professional preparation. All thirty-one teachers in the study held a basic teaching credential, i.e., a kindergarten-primary, a general elementary, junior high, or secondary teaching credential. Twenty-eight of these teachers held a regular credential for teaching the mentally retarded, while the remaining five teachers held a postponement of requirements or provisional credential. Table 5:2 presents the types of credentials held by the teachers in the study.

TABLE 5:2

TYPE OF CREDENTIALS HELD BY TEACHERS

Type of Credential	Number
Basic, plus Special for Mentally Retarded	21
Above, plus Pupil Personnel	2
Above, plus Psychometrist	1
Above, plus Partially Seeing	2
Above, plus Speech Correction	1
Basic, plus Postponement of Requirements for Mentally Retarded	3
Basic, plus Provisional for Mentally Retarded	1
	31

The teachers' ages ranged from 24 through 60 with a median age of 44 years. All of the teachers had prior teaching experience either with the educable mentally retarded or with "normal" children. Approximately 27% of the teachers had experience with the educable, with a range from one through seven years and with a median of two years. Sixty-five percent of the teachers reported experience with the "normal" child, ranging from one through fifteen years with the median of 4.5 years. The range of teaching experience with the trainable retarded was from zero through seven years, with a median of 3.2 years.

2. Criteria for School Enrollment

The general criteria which serve as minimum eligibility requirements for enrollment in classes for trainable retarded children are contained in the California Administrative Code, Title 5, Article 21. In addition to these criteria, presented in Chapter Two, three districts specified that the child's intelligence quotient should fall between 25-50. Some of the districts utilized a combination of age and intelligence as a basis for eligibility, specifying that the child be at least 8 years of age and have achieved a mental age of 3 years. One district specified that the child be able to travel to and from school by taxi.

All but one district have a period of trial placement, during which it is determined whether it is feasible to maintain the child in the program. The trial period ranged from one month to an indefinite length of time, with six of the ten districts specifying the latter. The decision to exclude a child from the program is nearly always made by an evaluation committee, using the case conference method. The committee generally includes the teacher, the principal, the school psychologist and/or the special coordinator. Some districts indicated that a nurse or medical consultant usually serves on this committee. Such consultation is particularly important where the amount of medication a child may be receiving is interfering with his ability to respond to the program. To a great degree, the decision to exclude a child from the class is based on the committee's continued evaluation of the child relative to the admission criteria. The decision, therefore, is generally contingent upon the child's social and emotional adjustment rather than on his progress toward specific curricular objectives. Only half of the school districts indicated that the child should be able to profit from the program in order to continue his enrollment.

The parents are always informed of the district's evaluation of their child and usually are invited to participate in the discussions. The parents may be present at the case conference or they may discuss the problems with the teacher or administrator on an individual basis. Where the child's problem is basically related to health (e.g., nutrition, hearing, vision, seizures), parents are referred to a physician, a clinic, hospital, a health department or an organization dealing with specific disabilities. In such cases, most of the districts require the parents to follow through on the recommendations made by the school if the child is to continue in the program.

Recommendations are made to the parents in the event that a child does not qualify for or is excluded from a school program. These recommendations are usually of two types: referral to another agency, either public or private; or suggested training procedures in the home. Referrals are made to state institutions, health and probation departments, private schools and parent groups. Most districts actually recommend institutionalization if in their opinion the child cannot profit from a school program or if the home situation appears undesirable.

3. Criteria for Grouping Children

The criteria for grouping children reported by the ten school districts are summarized in Table 5:3. Primarily, the grouping criterion utilized by the school districts was chronological age. Additionally, the general maturity of the child, physically and socially, was an important factor in grouping. Although social competence may be included in the evaluation of a child's general maturity, only four of the districts specifically mentioned social age or social competence. The California Administrative Code, Title 5, Education, Article 21, states, "Pupils in such schools and classes shall be grouped on a basis of social competence rather than by grade level."

TABLE 5:3

CRITERIA FOR GROUPING CHILDREN
REPORTED BY SCHOOL DISTRICTS

District	C.A.	M.A.	I.Q.	General Ability	Social Age	Physical Size	Special Handicaps
1	x			x		x	
2	x		x		x		x
3				x			
4	x	x					
5	x	x		x		x	
6				x	x		
7	x						
8	x				x		x
9	x				x	x	
10	x						x
Percentage	80	20	10	40	40	30	30

B. INSTITUTIONAL SCHOOL INFORMATION

The California State Department of Mental Hygiene operates four institutions for the mentally retarded; one of which participated in this study. Teachers employed by these institutions are required to hold a valid teaching credential. In addition to a General Elementary Credential, the four teachers participating in this study hold a credential for teaching the mentally retarded.

The forty children who attended school within the institution were divided among four classes. (The criteria and procedures for selecting these children are reported in Chapter Two.) Three classes were conducted within the school building and one class was conducted in a room set aside as a classroom on the ward in which the children resided. These classes were scheduled for 150 minutes daily.

The supervision of these classes was primarily the function of the School Principal, although one teacher was designated as a supervising teacher and spent a portion of her time in supervising the teachers participating in the study.

II. CLASSROOM OBSERVATIONS

The purposes of the classroom observations were to determine the specific curricular content of each class program, the methods employed by the teachers in implementing these programs and the behavior of the children during the school day. Although the teachers could have provided the research staff with a representative daily lesson plan, such plans would have been too gross to permit a detailed evaluation of the content of the school program. These plans would not yield information regarding the children's responses to the program; further, the instructional adequacy of the teacher could not be evaluated from such plans.

An observation schedule was developed in order to obtain detailed information for each of these purposes. This schedule contained categories, each comprising a number of alternatives which related to the organization of the school day, teaching procedures and student-teacher interaction within each activity. In order to determine whether this schedule was adequate for the above purposes, a number of preliminary observations were conducted in public school classes not involved in the study. For each of these observations two staff members were present and they independently recorded the classroom activities. A high degree of agreement was obtained between the ratings of the observers on the categorical alternatives. In those few instances where there were disagreements between the observers, the categorical alternatives were revised so as to minimize misunderstanding because of vague terminology.

The first classroom observation took place in the Spring of 1959. The second and third observations were conducted during the Fall of 1959 and the Spring of 1960. For the first observation two observers were present in each classroom and the degree of agreement for their independent evaluations was consistently high; therefore, for the second and third observations only one observer was present.

Arrangements for the project staff to visit the classrooms were made with the administrators of the school programs participating in the study and the teachers were always informed of these forthcoming visits. The observers stated that they wished to observe and record the children's behavior and the teachers were requested to carry out their programs as planned. The observers did not suggest changes or interfere in any way with the teacher's program. During the first observation there was some tendency for the teachers to discuss the children enrolled in the study with the observers and to explain the daily program. In subsequent observations, once the day's program had been initiated, the teachers generally ignored the observers.

The observation schedules utilized for the second and for the third observation were more comprehensive and more realistic in terms of the school programs than the first observation schedule. The facility with which notations could be made was increased and the descriptions were, in general, more inclusive than for the first observation. A number of subjects were transferred to other schools or to state institutions during the second year, thus the third observation did not yield as adequate coverage of study subjects as did the second observation. Therefore, the information obtained from the second observation was utilized for data analysis and all subsequent references to observational data are for this observation.

The observation schedule on which the data are based contains 20 categories. These categories were concerned with the preparation for and initiation of each activity, the role of the teacher in facilitating the children's learning during the activity, the degree to which the children participated in the activity and the teacher's evaluation and method of concluding the activity. A number of descriptive statements were contained within each category and the observer selected the statement that most nearly described the activity observed. At the conclusion of the school day the observer wrote a description of each activity based on these statements, as well as notes taken during the observation. A copy of the Classroom Observation Schedule is contained in Appendix H.

A. METHOD OF DATA ANALYSIS

Each time period during the school day was designated as either Instructional or Noninstructional. Instructional time periods were then divided into Instructional-Social Competence and Instructional-General. From the descriptions of the observations, each Instructional time period was judged as "high adequacy" or "low adequacy." Based on the teacher's adequacy for each of the categories of Instructional-Social Competence and Instructional-General, analyses were made of the children's social competency change scores.

1. Instructional Time Periods

Instructional time periods were defined as those periods in which an identifiable effort was made to increase the children's competence under the direction of the teacher.

The criteria for categorizing an Instructional time period as "high adequacy" were as follows: materials easily accessible and sufficient for conducting the activity; a high degree of teacher supervision during the activity with individualized attention in evidence; most or all students engaged in the activity with additional tasks provided for children finishing early; differentiation among the children's ability levels relative to the activity; opportunities for assuming responsibilities provided for by the teacher; general and/or specific evaluative statements of the children's work made by the teacher or by the teacher eliciting evaluation statements from the children; deviant or distracting behavior handled by the teacher with minimal interference with the ongoing activity.

The criteria for categorizing an Instructional time period as "low adequacy" were as follows: materials are in insufficient quantity or are not immediately available to the teacher and/or the children; minimal supervision of children once the activity is under way; few children participate in the activity and the teacher does not invite participation from the remainder of the group; all children are expected to perform at the same level regardless of their abilities; few opportunities for students to assume responsibilities are provided for by the teacher; no evaluative statements are made by the teacher or the children regarding the children's work; the activity is characterized by deviating behavior which consumes major portions of the teacher's attention.

a. The Instructional-Social Competence time periods were defined as those periods which were devoted specifically to increasing the children's self-sufficiency and social responsibility. In general, the social competency time periods were devoted to developing the children's ability to help themselves, instructing the children in the requirements of certain social and interpersonal relationships and increasing the children's ability to communicate their wants to others.

Examples of classroom descriptions categorized as Instructional-Social Competence follow:

High Adequacy

Lunch: 11:05-11:35. The children lined up at the door of the classroom and walked to the cafeteria. Remaining in single file, each child picked up a tray, a napkin and utensils, walked through the line, and received his hot plate and a carton of milk. The children took their seats at their assigned table and began eating. The eating skills of the children were good; they were able to handle their utensils well. In the few instances where children had difficulties, the teacher instructed them as to how to proceed. Conversation was minimal, with the teacher neither encouraging nor discouraging social interaction. The lunch period was unhurried, and there was a minimum of deviating behavior. One boy was assigned to pick up the paper napkins and the milk cartons, and another boy was asked to collect the utensils. This boy passed among the children with a tray, and each child put his utensils on it. Before the children were excused from the table, the teacher reminded them to scrape their dishes and to deposit their trays and plates in a designated area of the cafeteria. One child was having difficulty carrying his tray; the teacher asked another child to carry it for him. This entire procedure was carried out without mishap. The children were then dismissed to go out to the play yard.

Safety: 9:15-9:35. The teacher announced to the children that there would be a fire drill very soon and that they were to listen to what she had to say to them. She told them that soon the school bell would ring for a long time and that when they heard the bell ring they were to get into line as usual---the boys and girls in their respective lines---and that they were to go into the outdoor play area. She did not elaborate further as to the purpose of the drill. Two children were selected as captains. She repeated the instructions several times, and spent about five minutes asking each child what he was to do when the bell rang. At 9:30 the bell rang, and all but one child followed the directions and proceeded to the play yard. This child cowered in a corner of the room and covered her ears with her hands. She was found and sent out to join her classmates.

At the conclusion of the fire drill the children returned to the classroom, and without further direction, brought their chairs to the rear of the room and seated themselves in a semi-circle. The teacher spoke firmly and sharply to the youngster who had been frightened during the fire drill. The teacher then went through the routine that the child was to follow at a fire drill. The child appeared to be uncomfortable and unhappy, not so much with what the teacher was saying, as with the confusion of this unfamiliar activity. The child appeared distressed by the loud bell and the mass movement of all the children in the school.

Low Adequacy

Speech: 10:35-10:50. The speech teacher was five minutes late. After he came in, the children were directed to seat themselves around the table. The speech teacher held up a giant-sized paper ice-cream cone and told a story about Chocolate Charlie. As Chocolate Charlie, he sold his ice-cream cones, alternately holding up four different kinds of ice-cream cones. The children watched intently. He then sang a Chocolate Charlie song as he "sold" the four cones to four children. Then the speech teacher called on a child to be Chocolate Charlie and to sell cones to the others. The child was to call out, "Ice-cream cones, who will buy my ice-cream cones." Very few words were attempted as the cones changed hands and only a few children had a chance to be Chocolate Charlie. No child was given encouragement to speak during this activity. One by one the children began to lose interest; attention began to lag, and the children sat listlessly.

Then the speech teacher said he was going to tell them a story. He pulled out a hand bunny, who was supposed to say "Ha, ha, ho, ho, hee, hee--everybody laughs with me." The children were to help the bunny make the sounds. The teacher appeared to be going through the motions; he elicited sounds from the children without pausing to assist, correct or ask a child to repeat. For the most part the speech teacher dominated the activity, talking almost constantly, and at the end of the speech period each child had contributed only two or three words.

Health: 9:15-9:30. There was a bulletin board which was used exclusively for the brushing of teeth activity. The class had a little brownie named "Miltie" who was 6 yrs. old, and every child in the room had a little paper Miltie. Miltie was put next to a child's name on the bulletin board if the child had brushed his teeth that day. And so in careful fashion the teacher asked each child whether he had brushed his teeth that morning. Most of the children said "no,"---although they were eager to have Miltie next to their names on the bulletin board. Where a child said "no," the teacher asked the matron to check the child's teeth. Sometimes the child's teeth looked clean enough for him to have earned a Miltie, and sometimes the matron took the child's word for it and he received a Miltie next to his name. The teacher gave a brief talk about their friend, Miltie, who helped them to keep their teeth clean. They were to be very nice to Miltie and in the morning they are to be sure to help Miltie by brushing their teeth.

b. Instructional-General time periods were defined as those periods which were geared toward increasing the children's general competence but which were not related specifically to the development of the children's social competence. By developing motor skills the classroom program may contribute to the children's learning of the specifics of self help. For example, motor coordination might be developed through the use of play equipment, manipulation of clay and cutting paper. Some of the manipulations performed in carrying out these activities are similar to the manipulations required for buttoning, tying and using utensils and other self help activities. Activities such as arts and crafts, music and organized games are categorized as Instructional-General.

Examples of classroom descriptions categorized as Instructional-General follow:

High Adequacy

Story Time: 11:40-12:15. The children sat in a semi-circle around the teacher. She asked for volunteers to act out a story. They all raised their hands and auditioned for the roles. The roles were a cat, a dog, a snorer, a grandfather's clock, a horse, a loud noise, the rain beating down and the wind blowing. Each child was given a part and when a role came up that a child could not handle, parts were switched so readily that the child did not mind the switch, so long as he had a part. Then each child rehearsed his part. After the rehearsal, the teacher read the story and the children acted out the parts. The teacher elicited enthusiastic responses and the children were intensely involved in the preparation and execution of the story.

Identifications: 9:45-10:00. The teacher divided the class into three levels. The first group remained with the teacher and the other two were given work at their desks. Group one, comprised of four children, was told by the teacher that they were going to play a new game. "It's called the Check Room Game," she said. She asked the children, "Have you ever been to a restaurant where they have boxes to put your things in--hats and gloves?" No one was able to identify this experience. Then the teacher asked, "Do you have shelves at home in the closet?" "Yes" some of the children replied. Then the teacher said, "Here in our school we keep our toys on our shelf. I tell you this because of this new game."

The game was on a chart. The chart contained five rows down and five sections across, which the teacher called "boxes." In the top row the first box was empty, the second box contained books, the third one was empty, the fourth one contained an apple, and the fifth one contained a toy. In each of the second, third, fourth and fifth rows were articles in two or three of the five boxes. The teacher explained what she meant by top row, and what she meant by bottom row, and what she meant by middle row. She went over and over this matter of "middle row"---"There are two rows on one side, and two rows on the other side, then row three is the middle row." Then she asked the children, "Can you find the bottom row?" As Doug raised his hand he jumped up and pointed to the top. Lois volunteered to show Doug the correct row. She came up and was able to identify the bottom row as well as the objects in that row. Then the teacher called Harry. "Harry, can you find the top row?" Harry was able to do this. "And can you tell me what are in the boxes in that row?" He did this with dispatch. "Norah, can you find the middle row?" Then she asked, "Doug, can you find the second row?" "Lois, can you find the third row?", "Harry, can you find the fourth row?" Toward the end of the activity she asked Doug, "What is in row 1, box 2?" Doug took his time, found row 1, went over to the second box and correctly said, "book." Then she asked another child, "What is in row 3, box 1?", "What is in row 4, box 1?" Norah could not do row 5, box 1, and the teacher asked her to sit down. As she did, Norah said, "But I'm not stupid." The teacher said, "Of course you're not, you just weren't paying attention." The children had not grasped this new lesson at first, but at the end of the activity they were beginning to get an inkling of top and bottom, as well as second row, third row, etc., although middle row was still not grasped. Then they were given seat work so that the teacher might work with one of the other groups.

Low Adequacy

Music: 10:45-10:55. The teacher had an auto harp. She pressed bars to obtain correct chords while several children took turns in running fingers across the strings. Actually the teacher was strumming the strings, but there was a little section on the other side of the auto harp which she told the children to strum. For all practical purposes they were making no sounds. She was providing chords from the bars as well as strumming the strings. Not only did she make all of the music, but she did all of the singing. She paused after one song, "Good," she said, "We're singing very nicely," although no one else had sung. Then she said, "All right, Joan, what do you want to sing?---Working on the Railroad? O.K." The child had not made the suggestion, but when the teacher started, a few children chimed in on the first lines. However, the teacher sang the remainder of the song. "Good," she said. The children were not involved in this activity and they did not appear interested.

Drawing: 10:45-10:55. The teacher placed crayons on each child's desk. Most of the children began to color. "Can you draw a brownie?" the teacher asked one child who was doing nothing. The room was very noisy. The teacher was saying, "Shhhh!---You can't work when you are noisy." Harold was not drawing, but rather, he wandered around the classroom. The teacher said, "Come on, Harold, I'll help you." Harold balked. "You see," the teacher offered, "He doesn't like to draw." She left Harold where he wanted to be and then she brought him a game which he fingered idly for the rest of the craft period. The children scraped the crayons across the papers. One child printed the letter "p" all over her paper. Two children made circles all over the paper. The room continued being noisy. The teacher walked from child to child to help each one to print his name on the scribbled sheet. No child used more than one color, nor did the teacher encourage them to try another color. They scribbled across their papers. There was one page of green, and a page of blue, and a page of red. Only one child, working independently of the others and away from the teacher and the noisy group, attempted to crayon a picture. His was a two colored fireplace.

2. Noninstructional Time Periods

Noninstructional time periods were defined as those periods in which no organized activity was in evidence or the activity did not meet the minimum "Instructional" criteria. Such time periods were rest, recess used as outdoor free play periods, indoor free activity, and activities which did not meet the minimum "Instructional" criteria. A discussion and an example of each of these types of time periods follow:

a) Rest. Although a small portion of time at the beginning and the conclusion of the rest period may permit some student responsibility, such as securing and returning the mats and removing shoes, the major portion of the rest period contained no element of training. "Rest" may have been desirable or even necessary, from the teacher's point of view, nevertheless, the intention of the rest period was to reduce the children's activity to a minimum.

> Rest: 1:30-1:50. The children were instructed to return to their classroom from the play yard and each was given a mat which was placed on the floor. After the children got settled on the mats the blinds were drawn. The teacher physically held down one boy because he was hyperactive. Although the other children remained on their mats, there was squirming and talking and giggling throughout the rest period. After twenty minutes, each child was called by name and was requested to set his mat on a table.

b) Indoor Free Activity: Portions of the school day designated as "free activity" were time lags between activities, periods of waiting for home transportation and free play in the classroom. An example of the latter type of activity follows:

> Indoor Free Activity: 9:00-9:15. The first fifteen minutes of the day were spent with the children grouped around the tables, each with a toy, color crayon and paper or book -- all placed so as to be accessible to the children. Evidently the children knew this routine, because there was no random wandering to start the day off. The children were friendly to each other, and they socialized and chatted in a quiet controlled way. There was no sharing of toys and books, nor did it appear that any child was interested in what the others were doing. While the children were so engaged, the teacher sat at her desk and attended to such matters as taking the attendance, making out the orders for lunch and for milk and attending to other clerical tasks. So long as the social interaction did not interfere with classroom decorum, the teacher ignored it. There was no attempt by the teacher to evaluate any of the action taking place at the tables.

c) Outdoor Recess:[1] As contrasted with those outdoor time periods devoted to organized games and categorized as "Instructional-General," all of the outdoor time spent in free play was categorized as "outdoor recess." For this study the time periods devoted to the toilet routines are described separately from the outdoor recess periods.

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[1] The California Administrative Code does not make provision for recess periods for the trainable child other than that provided for the regular grades. This Code requires that "not less than a total of 20 minutes daily shall be devoted to recess in any grade in the elementary schools, and in no case shall a pupil of grade one, two or three be kept in school longer than one hour without a recess." These recess periods are designated in this Code as ten minute periods for each hour of school attendance.

> Outdoor Recess: 12:25-1:00. The children lined up at the door and, when it was clear to them that they might leave the room, they ran out to the playfield. The teacher and the matron picked up a bench and took it to the far corner of the play area and sat down. Two of the girls used the swings, others ran around, a couple chatted, a few of the boys tossed each other around in a playful fashion and a few of the girls wandered around doing nothing in particular. An adult came into the playground and the teacher and the matron chatted with her. From time to time some child on one of the swings came to talk to the teacher and the matron. At no time did either the teacher or the matron enter into any activities or help a child initiate an activity. Eventually the teacher went over and just sat in one of the swings and began swinging. There was little play going on and some gentle jostling among a few of the fellows, the girls had become tired of swinging and they wandered over. One of them hugged the matron and the other just wandered listlessly from swing to swing, not getting into either one. Generally, this was a recreation period with pronounced inactivity. This block of time lasted for 35 minutes and then the children returned to the classroom.

d) Other Noninstructional Time Periods: Where an activity did not meet the minimum "Instructional" criteria, it was categorized as "Noninstructional." An example of a lunch period that was designated as Noninstructional is presented below. This example may be compared with the lunch period which was categorized as Instructional-Social Competence and presented on page 118.

> Lunch: 11:20-11:55. The children lined up so noisily at the rear of the room that the teacher threatened to return them to their seats. They ignored her admonitions and she and

the matron took them in two's to the cafeteria. In the cafeteria, they threw their coats and jackets in a heap in one corner of the room and finally seated themselves at the tables. One child, who took his jacket to the table with him, was reminded by the teacher to take his jacket to the corner. He took it and threw it on top of the others. The matron brought lunch on compartmentalized trays to each child. The teacher and the matron supervised constantly, mostly to maintain order. Only when the children engaged in almost primitive eating habits did either the teacher or matron admonish them. The teacher and the matron ate lunch at the children's table. They did not assist the children or attempt to train them in a mealtime skill.

B. PUBLIC SCHOOL OBSERVATIONAL DATA

Analysis of the public school observational data yielded twenty identifiable types of time periods. The percentage of time for each time period based on the category and adequacy determinations are presented in Table 5:4.

Approximately 44% of the classroom time was categorized as Instructional. Of this Instructional time, approximately 25% was considered to be Instructional-Social Competence, half of which was judged "low adequacy" and half judged "high adequacy." Seventy-five percent of the Instructional time was categorized as Instructional-General with half of this time devoted to music and arts and crafts. Of the total classroom time, lunch accounted for slightly over 11%, with 6.9% of this time not meeting the minimum Instructional criteria.

Fifty-six percent of the total classroom time was judged to be Noninstructional with Outdoor Recess, Indoor Free Activity and Rest accounting for three-fourths of this time. Time periods that did not meet the minimum Instructional criteria accounted for the remaining twenty-five percent of the Noninstructional time. Every teacher, with the exception of one, had a minimum of one outdoor recess period. There were forty-nine outdoor recess time periods for the thirty teachers, which ranged from ten to sixty minutes, with a median of thirty minutes, and sixty-eight indoor free activity periods, ranging from three to fifty minutes with a median of fourteen minutes. No differentiation was made between those time periods scheduled by the teacher as free play and those which resulted from time lags. There were twenty-four rest periods distributed among twenty-two teachers. The range of time devoted to rest was from five to forty-five minutes with a median of twenty minutes.

There was no relationship between the rankings based on the amount of teaching experience and the teacher's adequacy or the amount of time devoted to social competence skills; the correlations (tau) being .06 and -.02, respectively.

The percentage of time that was categorized as Instructional-Social Competence, Instructional-General and Noninstructional is presented in Figure 5:1 for each of the thirty-one public school teachers in the study. The median percentage of time devoted to Instructional-Social Competence by the teachers was 8.3% of the school day with a range from 0% to 30%. The median percentage of time devoted to Instructional-General by the teachers was 31.5% of the school day with a range from 5.6% to 65.6%. The median percentage of Noninstructional time of the teachers' school day was 61% with a range from 19.3% to 90%.

There is some suggestion that the length of the school day is related to the teacher's adequacy; the correlation (tau) between these factors being .32 ($\underline{P} < .01$).

TABLE 5:4

PERCENTAGE OF TIME DEVOTED TO EACH TIME PERIOD BASED ON THIRTY-ONE CLASSROOM OBSERVATIONS

Time Period	Inst.-S.C.		Inst.-Gen.		Noninst.	Total
	Low	High	Low	High		
Outdoor Recess					19.2	19.2
Indoor Free Activity					17.2	17.2
Lunch	1.9	2.5			6.9	11.3
Music			5.3	3.3		8.6
Arts & Crafts			5.1	3.3		8.4
Rest					6.6	6.6
Opening Exercise	.1		2.8	.9	.2	4.0
Identification	.1		1.5	2.0		3.6
Oral Activities	.6	.7	1.7	.6		3.6
Toilet Routine	.8	.7			1.0	2.5
Snack Time		.2			2.3	2.5
Story Time			.7	1.5		2.2
Indoor Organized Games					1.8	1.8
Outdoor Organized Games			.2	1.5		1.7
Health	.9		.4		.3	1.6
Preparation & Clean-Up	.3	.4	.2	.1	.5	1.5
Reading			.6	.6		1.2
Numbers			.4	.7		1.1
Nature Study			.5		.3	.8
Safety	.1	.4				.5
Total	4.8	4.9	19.4	14.5	56.3	99.9

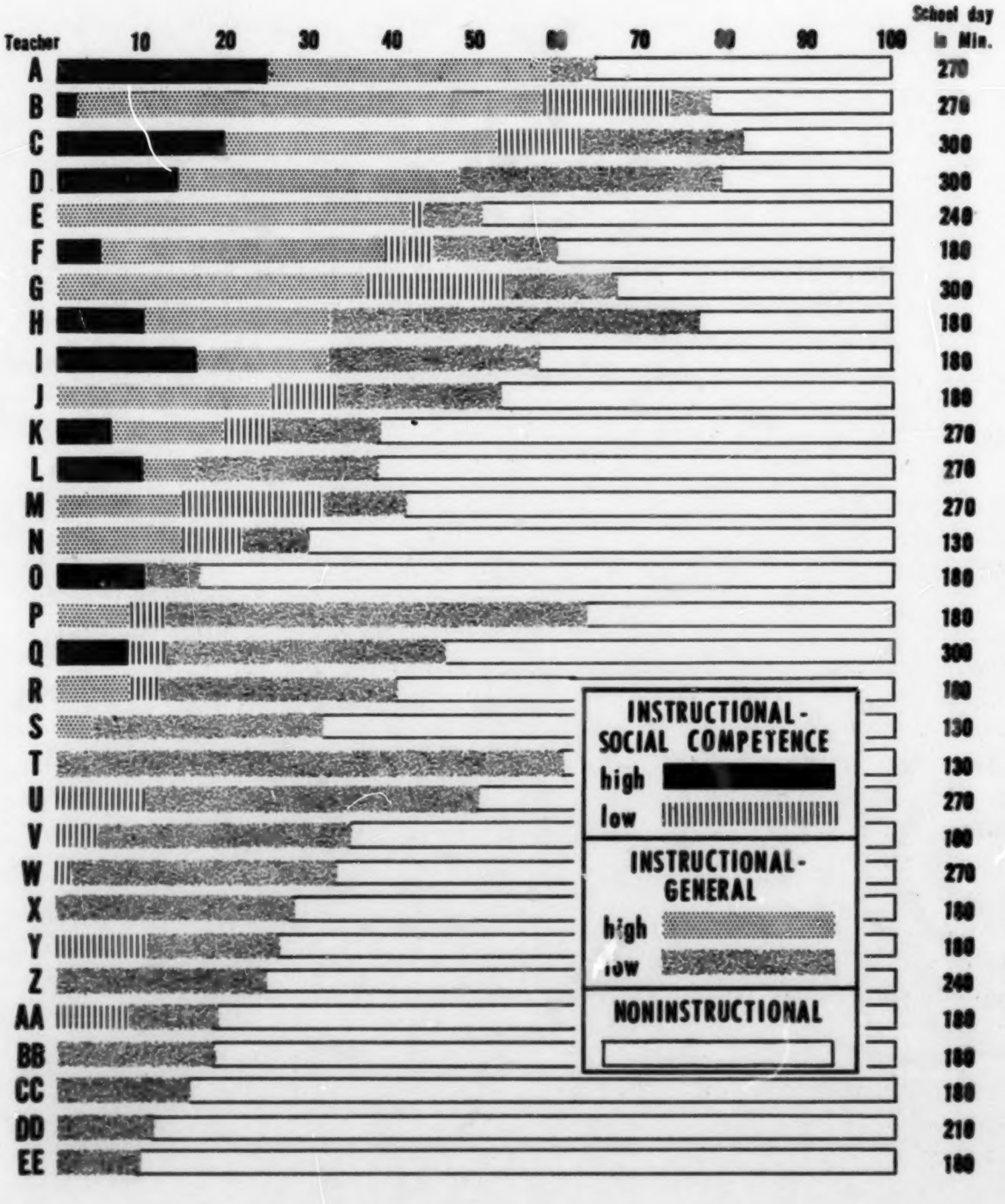

Figure 5:1

PERCENTAGE OF CLASSROOM TIME CATEGORIZED AS INSTRUCTIONAL-SOCIAL COMPETENCE, INSTRUCTIONAL-GENERAL AND NONINSTRUCTIONAL FOR 31 TEACHERS

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1. Instructional-Social Competence and Social Competency Change Scores.

The teachers were rank ordered according to the amount of time that they devoted to Instructional-Social Competence, regardless of the adequacy determination. This distribution was dichotomized, providing "low" and "high" categories of teachers. Analyses of the children's social competency change scores, based on mother ratings, were performed for the two categories of teachers. The means and standard deviations of the children's social competency change scores for these teacher categories are reported in Table 5:5. The t test comparisons for the subscales and total score are nonsignificant. However, the meaningfulness of the comparison between "low" and "high" teachers is questionable, because the median percentage of time devoted to Instructional-Social Competence by the "high" teachers was only 13%.

2. Instructional Adequacy and Social Competency Change Scores.

The teachers were categorized as "low" or "high" based on the adequacy determinations of those time periods judged Instructional, regardless of whether they were Social Competence or General. Analyses of the children's social competency change scores for the "low" and "high" teacher categories were made. These data are presented in Table 5:6. The t tests between the groups for the subscales and total score were nonsignificant.

TABLE 5:5

MEANS AND STANDARD DEVIATIONS OF CHILDREN'S SOCIAL COMPETENCY CHANGE SCORES OF "LOW" AND "HIGH" TEACHERS BASED ON TIME DEVOTED TO INSTRUCTIONAL-SOCIAL COMPETENCE

		Instructional-Social Competence	
		Low N=27 children	High N=24 children
SH	Mean	6.74	7.13
	S.D.	10.21	6.36
IR	Mean	5.22	5.83
	S.D.	8.12	7.20
SS	Mean	2.96	4.17
	S.D.	5.03	6.20
C	Mean	2.59	4.04
	S.D.	5.07	6.93
T	Mean	17.52	20.50
	S.D.	23.33	18.38

TABLE 5:6

MEANS AND STANDARD DEVIATIONS OF CHILDREN'S SOCIAL COMPETENCY CHANGE SCORES OF "LOW" AND "HIGH" TEACHERS BASED ON DETERMINATIONS OF INSTRUCTIONAL ADEQUACY

		Instructional Adequacy	
		Low N=30 children	High N=20 children
SH	Mean	6.33	8.15
	S.D.	10.63	6.11
IR	Mean	5.93	6.35
	S.D.	6.64	6.39
SS	Mean	2.90	5.05
	S.D.	4.84	5.91
C	Mean	2.57	4.85
	S.D.	4.83	6.57
T	Mean	16.93	23.15
	S.D.	22.26	17.56

C. INSTITUTIONAL SCHOOL OBSERVATIONAL DATA

Three observations were made of the four institutional classrooms. The observation schedule, the recording procedures and the judging criteria were identical to those employed for obtaining the public school data. As with the public schools, the findings are based on the data obtained from the second observation.

Thirteen types of time periods were identified and these were categorized as Instructional-Social Competence, Instructional-General, and Noninstructional. Each of the Instructional time periods was categorized as either "high adequacy" or "low adequacy." The percentage of time for each time period based on the category and adequacy determinations are presented in Table 5:7.

Of the total classroom time, thirty-five percent was categorized as Instructional, of which approximately twenty-five percent was Instructional-Social Competence. Less than two percent of the Instructional time was judged as "high adequacy." Sixty-five percent of the total classroom time was categorized as Noninstructional.

Because the trainable mentally retarded children eat lunch on the wards, this area of social competency training was not part of their school program. However, there was apparently some effort to compensate for this lack by providing a "snack time," which comprised 12% of the school time. All of this time was categorized as Noninstructional. The toilet routines, which could have provided an excellent means of emphasizing certain habits of health and cleanliness, were judged as either "low adequacy" or Noninstructional.

The time period of "Late Arrival and Early Dismissal," accounting for 13.8% of the total classroom time, was a result of bus scheduling problems. Because of the distance of some wards from the school, a number of the children were transported to the school by bus. These buses were used for many transportation purposes within the institution and, as a consequence, the buses were not always available when required for transporting children to and from school.

In addition to transportation difficulties, there were a number of other problems in regard to children attending school within the institution. Population movements within the institution and the rapid spread of disease (which required that complete wards be quarantined) were major problems. There was considerably greater absenteeism within the institution than occurred within the Community Experimental Group. Although the institutional children had a greater number of school days possible, their average number of days of school attendance for the two-year study period was only 117 days per year as compared with the average of 161 school days per year for the children enrolled in the public schools. Only fifty percent of the Institutional Experimental Group attended school for more than half of the possible number of school days. Quarantining and illness were the major factors in regard to the poor school attendance of the institutional children.

TABLE 5:7

PERCENTAGE OF TIME DEVOTED TO EACH TIME PERIOD BASED ON FOUR INSTITUTIONAL CLASSROOM OBSERVATIONS

	Inst.-S.C.		Inst.-Gen.		Noninst.	Total
Time Period	Low	High	Low	High		
Indoor Free Activity					16.3	16.3
Late Arrival and Early Dismissal					13.8	13.8
Identification			9.6	1.7	.8	12.1
Snack Time					12.0	12.0
Music			5.7		3.7	9.4
Toilet Routine	3.3				4.2	7.5
Outdoor Recess					6.7	6.7
Arts & Crafts			3.8		2.5	6.3
Opening Exercise			.8		4.2	5.0
Indoor Organized Games			4.2			4.2
Food Preparation	2.5					2.5
Preparation & Clean-Up	1.7				.8	2.5
Folding Articles	1.7					1.7
	9.2		24.1	1.7	65.0	100.0

III. SOCIAL COMPETENCY RATINGS PROVIDED BY TEACHERS

The teachers provided initial and final social competency ratings for the children in the study as an additional means of assessing change within the school group. Because the scale incorporated a high percentage of "home oriented" skills, it was recognized that not all of the items in the scale would be observable in the school situation. Therefore, for each item, the statement "No Opportunity to Observe" was included and the teachers were instructed to check this statement for those items where there was no opportunity to observe the behavior.

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TABLE 5:8

PERCENTAGE AND RANK ORDER OF "NO OPPORTUNITY TO OBSERVE" FOR INITIAL AND FINAL TEACHER SOCIAL COMPETENCY RATINGS OF COMMUNITY SUBJECTS

N=63

Self Help

	Initial		Final	
Item	%N.O.	Rank	%N.O.	Rank
1.	63	7	68	8
2.	78	3	78	4
3.	81	2	92	1
4.	3	22.5	06	20.5
5.	32	16	25	16.5
6.	56	11	49	14
7.	76	4	81	3
8.	11	19	02	22.5
9.	90	1	82	2
10.	43	15	33	15
11.	3	22.5	02	22.5
12.	59	9	73	5
13.	44	14	59	13
14.	52	12	65	10.5
15.	59	9	67	9
16.	65	6	71	6.5
17.	8	20	06	20.5
18.	16	18	11	18
19.	51	13	60	12
20.	5	21	10	19
21.	59	9	65	10.5
22.	29	17	25	16.5
23.	67	5	71	6.5

Social Skills

	Initial		Final	
Item	%N.O.	Rank	%N.O.	Rank
40.	16	11	06	9
41.	17	9.5	02	10.5
42.	51	6	52	6
43.	17	9.5	02	10.5
44.	75	1.5	65	4
45.	0	14	0	13.5
46.	21	8	11	8
47.	0	14	0	13.5
48.	2	12	0	13.5
49.	59	4	75	2.5
50.	75	1.5	75	2.5
51.	68	3	78	1
52.	30	7	22	7
53.	54	5	54	5
54.	0	14	0	13.5

Initiative-Responsibility

	Initial		Final	
Item	%N.O.	Rank	%N.O.	Rank
24.	33	6	24	8
25.	6	12	0	15
26.	67	4	71	5
27.	2	13.5	0	15
28.	46	5	73	4
29.	24	7	38	6
30.	13	9.5	11	9
31.	13	9.5	05	12.5
32.	2	13.5	0	15
33.	87	2	86	2
34.	17	8	27	7
35.	8	11	05	12.5
36.	76	3	80	3
37.	0	15.5	08	10
38.	0	15.5	06	11
39.	97	1	87	1

Communication

	Initial		Final	
Item	%N.O.	Rank	%N.O.	Rank
55.	14	6.5	05	7
56.	0	14.5	0	14.5
57.	0	14.5	0	14.5
58.	19	5	28	2
59.	0	14.5	0	14.5
60.	0	14.5	0	14.5
61.	0	14.5	0	14.5
62.	0	14.5	02	10
63.	0	14.5	0	14.5
64.	33	3	21	3.0
65.	6	8	03	8.5
66.	2	10	0	14.5
67.	3	9	03	8.5
68.	14	6.5	14	5
69.	0	14.5	0	14.5
70.	30	4	08	6
71.	73	1	48	1
72.	46	2	19	4

TABLE 5:9

AVERAGE PERCENTAGE OF "NO OPPORTUNITY TO OBSERVE" FOR INITIAL AND FINAL TEACHER SOCIAL COMPETENCY RATINGS

N=63

	Initial	Final
Self Help	45.67	47.87
Initiative-Responsibility	30.69	37.56
Social Skills	30.31	29.47
Communication	13.33	8.39
Total	31.47	30.76

TABLE 5:10

CORRELATION (TAU) BETWEEN RANK ORDER OF PERCENTAGE "NO OPPORTUNITY TO OBSERVE" OF INITIAL AND FINAL TEACHER SOCIAL COMPETENCY RATINGS FOR COMMUNITY EXPERIMENTAL SUBJECTS

N=63

	Tau
Self Help (23 items)	.87
Initiative-Responsibility (16 items)	.73
Social Skills (15 items)	.82
Communication (18 items)	.84

for all teachers. As reported in Table 5:8, the Communication items were generally observable and account for a small percentage of the "No Opportunity to Observe" distribution. However, the items marked "No Opportunity to Observe" by teachers were generally consistent with expectation. Items involving food preparation, bed making, the brushing of teeth, etc., are not as observable in the classroom as the removing of outer clothing or opening doors.

The fact that a teacher rates a child on a particular item in the scale does not mean that the behavior has been intentionally included in the curriculum. Based on the observational data reported in the previous section, it is not tenable to interpret high "observational opportunity" as a reflection of the teacher's explicit focus on the teaching of social competency skills. Although a teacher may observe the performance of a social competency skill, she may not provide instruction. For example, the observation of the children's eating behavior will, to a great degree, depend on whether they eat lunch at school and the type of lunch provided. The hot lunch could permit observation for virtually all nine specific eating-type items and a number of related behaviors included in the San Francisco Social Competency Scale. If the lunch is brought from home and is of the sandwich variety, few eating skills can be observed. However, there is no assurance that more instruction will be provided in the former lunch situation than in the latter. This is borne out by the observational data reported in the previous section.

The correlation (tau) between the percentage of items designated "No Opportunity to Observe" and the percentage of time devoted to the teaching of social competence, based on the observational data, was .01. Precisely the same correlation (tau) was obtained between the teachers' adequacy rankings and the "No Opportunity to Observe" rankings.

IV. TEACHER ADAPTABILITY INTERVIEW

The teacher adaptability interview and judging procedures paralleled that of the parent adaptability interview. The teachers were presented with 16 situations relevant to the classroom. Their responses were judged along the continua of empathy, motivation and flexibility, utilizing the criteria developed for rating the parents' responses. Appendix I contains the Teacher Adaptability Interview Schedule. These interviews were tape recorded, transcribed and judged in precisely the same manner as the parent adaptability interview data. See Appendix C for a discussion of these procedures and Appendix D for the rating criteria.

The teachers' adaptability scores were rank-ordered. Teachers falling above the median rank were categorized as "high" adaptable and those below the median rank as "low" adaptable. The means and standard deviations of the children's social competency change scores for each of these teacher categories are presented in Table 5:11. The significance tests for each of the subscales and Total Score were non-significant.

TABLE 5:11

MEANS AND STANDARD DEVIATIONS OF SOCIAL COMPETENCY CHANGE SCORES FOR STUDENTS OF "LOW" AND "HIGH" TEACHERS BASED ON ADAPTABILITY RATINGS

		Low Teachers N=19 Children	High Teachers N=26 Children
SH	Mean	6.05	7.04
	S.D.	8.28	8.75
IR	Mean	4.63	5.81
	S.D.	5.67	8.22
SS	Mean	3.00	4.12
	S.D.	4.23	5.99
C	Mean	5.00	2.58
	S.D.	6.31	5.57
T	Mean	18.63	18.92
	S.D.	18.65	22.04

The correlation (tau) between the teacher adaptability score rankings and the observational data was .11 and .05 for the adequacy and social competency rankings respectively. The teacher adaptability rankings correlated .11 with the "No Opportunity to Observe" rankings. There was a negative correlation (tau= -.19) between the amount of teaching experience and teacher adaptability. The ages of the teachers correlated .20 with their adaptability rankings.

V. TEACHER QUESTIONNAIRE

A questionnaire was developed in order to solicit the teachers' evaluation of their training, the type of supervision that they felt would be of most value to them and their conception of the kind of school program that should be provided the trainable retarded child. With the exception of Question Three, for which categorical alternatives were presented, all of the questions permitted free responses by the teachers. This questionnaire was administered to 28 teachers in their classrooms at the conclusion of the final observation sessions, and their responses were recorded verbatim. Each question and a summary of the teachers' responses follows.

1. What kind of program do you think the colleges should offer in order to train teachers of trainable mentally retarded children?

The teachers, in stating what the colleges should offer, emphasized the practical, rather than the theoretical aspects of their training. They felt that there should be more information on methods and techniques that specifically relate to teaching the trainable retarded child. They indicated that the major curriculum emphasis in college courses at present is in the area of teaching the educable mentally retarded, with only incidental mention of the trainable retarded child. A number of teachers indicated that the individuals giving college courses in the field of retardation had insufficient teaching experience to provide them with the background needed for training teachers of trainable mentally retarded children.

The following areas of emphasis were considered important by the teachers in the study in regard to the development of a training program for teachers of trainable children.

Areas of Emphasis	Number of Responses
Curriculum and methods for teaching the trainable retarded child	12
Arts and Crafts	12
Student teaching with mentally retarded	12
Psychology of exceptional children	8
Demonstration and observation	8
Speech correction	7
Differential teaching techniques for specific diagnostic classifications (mongoloid, brain-injured, etc.)	7
Music	6
Parent counseling and interviewing	6
Child development	5
Workshops	4
Reading readiness	3
Nature Study	3
Physical education and recreation	3
Student teaching with "normal" children	1
Internship at institution for mentally retarded	1
Occupational therapy, home economics, language arts number concepts, audio-visual techniques, evaluational procedures	1 each

2. What areas in your training have you found most helpful in regard to teaching trainable retarded children?

The course emphasis was primarily in the general area of the psychology of exceptional children. Only five of the twenty-eight teachers who were interviewed indicated that the curriculum and methods courses for teaching the mentally retarded were of help to them.

It is of interest that only three teachers indicated that student teaching was helpful in their training; however, the number of teachers having had this experience was not determined. With regard to both the curriculum courses and the student teaching experience, the teachers indicated that the major focus had been on the educable child rather than on the trainable retarded child.

The following areas were indicated by teachers as being helpful to them in preparation for teaching trainable retarded children.

Areas of Emphasis	Number of Responses
Psychology of exceptional children	11
Arts and Crafts	9
Speech correction	6
Curriculum and methods for teaching mentally retarded	5
Teaching experience with trainable children	5
Workshops	4
Student teaching	3
Counseling and interviewing techniques	3
General elementary courses (basic skills)	3
Music, story telling, kindergarten training, child development and sociology	2 each
Science, health education and nursing	1 each
Teaching experience with normal children, educable children and nursery-kindergarten	1 each

3. How adequate a job do you think the teacher training programs do for teachers of the trainable retarded child?

The four categories listed below were presented to the teachers and they were asked to respond in terms of one of them. Two-thirds of the teachers felt that the teacher training programsin this field are not adequate. One teacher was unable to make a judgment about the quality of the teacher training programs.

The frequencies for each of these cat egories are listed below:

Very good	3
Adequate	8
Less than adequate	13
Poor	3

4. On the basis of your experience, what kinds of training do you think young trainable retarded children should have?

The responses of teachers were categorized into the following areas.

Category:	Number of Responses
Social-emotional	25
Speech and language	15
Self Help	15
Motor Skills	14
Following directions	10
Independence	7
Health and hygiene	7
Reading readiness	5
Environmental awareness	4
Identification	3
Safety	2
Number concepts	1

It is clear from the above responses that the teachers' conception of a training program for the trainable retarded child is in terms of social competency behaviors. However, in regard to their own training, the teachers emphasized the more traditional curriculum type courses (see responses to Question One) rather than courses designed to develop their instructional competence in the areas listed above. It should be noted that these teachers placed little emphasis on academic skills.

5. What kinds of problems do you see in carrying out your teaching plans for these children?

The problems centered around the development of the trainable child, school organizations and parents' follow-through at home. It is interesting to note that seven teachers indicated that they had no problems in relation to carrying out their classroom program for the trainable child.

Responses relating to problems of children:	Number of Responses
Deviant behavior	8
Motor coordination	3
Wide range of abilities	3
Speech, immaturity, attention span, health	1 each
Responses relating to problems of school program:	
Facilities and equipment	3
Lack of psycholcgical and medical help	2
No matron, departmentalized program, short school day, etiologies not segregated, curriculum coordination	1 each
No follow-through at home	7
Inadequate teacher training	1
No problems	7

6. What suggestions would you make for improving the present program for trainable children?

The teachers made the following suggestions in answer to this question.

Suggested Areas	Number of Responses
Curriculum improvement and coordination	13
Parent education	9
Availability of psychological and medical diagnosis and treatment	5
Improved facilities	4
No suggestions	3
Segregated by etiology	2
Improve professional attitudes	2
Reduce school waiting lists, reduce admission age, improve administrative understanding, employ matron, increase community understanding, provide better supervision	1 each

Slightly less than 50% of the teachers believed that the programs for the trainable child could be strengthened by improving the curriculum and increasing the opportunities for curriculum planning among teachers. Considering that the majority of teachers believed that their own training was less than adequate and that the colleges do not offer courses specific to the trainable child, it is understandable that the teachers would emphasize the in-service aspects of curriculum development.

The second highest frequency of responses for improving these programs relate to parent education. Six teachers, in response to Question One, indicated that their training should include courses in parent counseling and interviewing. Undoubtedly, there would be more effective communication between the parents and school personnel if the teachers felt more adequate in this area.

7. Ideally, how would you want a supervisor of these classes to function for you?

Primarily, the teachers' desire was that their supervisors function in a consultative, evaluative and resource capacity. Seven teachers felt that the supervisors should work directly with them in curriculum planning. Six teachers indicated that the supervisors should provide leadership in the field. Eight teachers volunteered the information that they have had no supervision in their present school situation.

The teachers indicated the following as the type of supervisorial functions they felt would be helpful to them.

Suggested Supervisorial Functions	Number of Responses
Consultative and Resource	12
Observation and evaluation	9
Resource for educational materials	8

Suggested Supervisorial Functions (Cont'd.)	Number of Responses
Curriculum planning	7
Provide leadership in the field	6
Confidant	3
Advise in regard to parent counseling	2
Demonstration teaching, help in speech therapy, help in physical education, contact with community, orientation for new teachers.	1 each

8. If the supervisor is to help you most, what kinds of training would you think such a person should have?

The following specific types of training were mentioned by the teachers in response to this question:

Suggested Training	Number of Responses
Teaching experience with the mentally retarded	22
Training in mental retardation	14
Teacher training in general education	10
Psychological background	7
Training in counseling and interviewing	4
Training in administration	3
Training in speech correction	1

9. Do you feel that the administration of your school district understands the program that you are conducting?

Of the 27 teachers responding to this question, nine teachers stated that the central administration of their school districts understood their programs, while nine stated that they did not. Eight teachers felt that there was partial understanding on the part of the administration. One teacher stated that she did not know whether or not the program was understood.

10. Under what circumstances do you have occasion to meet or work with teachers in your district who do not teach trainable retarded children?

Only two teachers indicated that they had the opportunity to work on some aspect of school curriculum with teachers who were not teaching mentally retarded children. Four teachers stated that they had contact with teachers of educable retarded children on committee assignments and curriculum related activities. The remaining 21 teachers indicated that their sole professional contacts are with other teachers of trainable children.

CHAPTER SIX

SUMMARY, IMPLICATIONS AND RECOMMENDATIONS

This study was concerned with the effects of school training on the social competency development of trainable mentally retarded children as well as the effects of this training on the adaptability of the parents of such children. In order to assess these effects, two scales were developed; the San Francisco Social Competency Scale and a parent adaptability scale. Initial and final social competency ratings were obtained from parents and teachers over a two-year period. In addition, the adaptability of the parents was assessed over this same two-year period. Changes in the social competency development of school and nonschool children residing in community and institutional settings were compared. Changes in the adaptability of parents of the community school and nonschool children were likewise compared. In addition to the measures of social competence and adaptability, information was obtained from the families including parental age, education, income and occupational status.

Each of the classrooms in which the school subjects were enrolled was visited three times during the two-year experimental period. Each visit was for an entire school day. The purpose of these visits was to obtain detailed descriptive data regarding the organization of the school programs and the curricular content.

I. DISCUSSION OF SCHOOL-NONSCHOOL FINDINGS

This study was based on the assumption that the objective of the schools in educating trainable mentally retarded children is the development of social competence. Therefore, it was predicted that trainable mentally retarded children attending school programs, whether at home or in an institution, would show greater increments in social competence than comparable children not attending such programs. An intensive analysis of many of the curriculum guides prepared for teachers of trainable children indicated that their major focus was on the development of social competency skills. Further, the teachers participating in this study enunciated the training goals for these children in terms of social competence.

There was a significant increase in the social competency development for the community children attending public school classes and for community children not attending such classes. However, the rate of social competency development did not differ between these two groups of children. There was a significant decrease in the social competence scores for the children residing in the institution. This decrease in scores did not differ for the school and nonschool children. It was concluded that the public and institutional school programs, as they are now conducted, do not foster the social competency development of trainable retarded children beyond that of children not attending such programs.

In order to determine the extent to which the school programs for trainable children were oriented to the development of social competence, initial and final social competency ratings were obtained from the teachers and classroom observations were conducted. The social competency ratings obtained from the teachers permitted the determination of those behaviors included in the social competency scale which were observable in the classroom during the two-year study period. An observation schedule was developed in order to obtain data in regard to the instructional procedures and the curriculum content. Intensive and detailed observations were conducted by the research staff for each of the school classes included in the study.

From the descriptions of the observations, each activity or time period during the school day was designated as either Instructional or Noninstructional. Instructional time periods were then divided into Instructional-Social Competence and Instructional-General and each of these Instructional time periods was judged as "high adequacy" or "low adequacy." Instructional time periods were defined as those periods in which an identifiable effort was made to increase the children's social competence under the direction of the teacher. The Instructional-Social Competence time periods were defined as those periods which were devoted specifically to increasing the children's self-sufficiency and social responsibility. The Instructional-General time periods were defined as those periods which were geared toward increasing the children's general competence but which were not related specifically to the development of the children's social competence. The Noninstructional time periods were defined as those periods in which no organized activity was in evidence or in which little or no effort was made to increase the children's competence.

Approximately 44% of the community classroom time was categorized as Instructional and 56% was categorized as Noninstructional. Of the Instructional time, approximately 25% was considered to be Instructional-Social Competence, half of which was judged "low adequacy" and half judged "high adequacy." Seventy-five percent of the Instructional time was categorized as Instructional-General. Of the total institutional classroom time, 35% was categorized as Instructional and 65% as Noninstructional. Of the Instructional time, approximately 25% was categorized Instructional-Social Competence, all of which was judged as "low adequacy."

The analysis of the observational data for both the community and institutional school programs revealed that only a small portion of the classroom time was devoted to the development of social competence. Further, a major portion of the classroom time was categorized as Noninstructional. Analyses of the social competency ratings provided by the teachers indicated that a considerable number of these behaviors were not observable to them. Based on the observational data, it is evident that existing school programs are geared minimally to the development of the skills measured in this study.

The problems observed in the school programs participating in the study appeared to be due to organizational difficulties in the use of classroom time and the teachers' assumptions regarding the abilities of these children. The amount of time devoted to recess, free activity and rest periods suggests that the school personnel may have devised their programs on the assumptions that trainable retarded children have a low energy level and diminished vitality. Although it is recognized that trainable retarded children differ from "normal" children in respect to these qualities, the general impression is that the school personnel treat these assumptions as expectations and, therefore, little or no demands are made of these children. An analysis of the observational data gives the impression that these expectations provide rationalizations for the teachers' acceptance of deviating behavior and performance below the level of the children's abilities. For example, when an activity was not proceeding satisfactorily, frequently the teacher would allow the activity to disintegrate into a free play period rather than make an attempt to develop alternative means of successfully concluding the activity. In many instances the children observed appeared to be going through a repetition of previously learned skills without any effort being made to extend the children's competence.

The teachers' use of rest periods provides an example of the assumptions regarding the energy limitations of trainable children. In many instances these periods were excessively long, often inappropriately placed in the sequence of the school's activities, and were required of all children regardless of age and general maturity.

The assumptions regarding the behavior of trainable children appear to be based on the notion that there is little variability within the group in regard to the children's ability to sustain interest in an activity, assume responsibilities, respond to specific directions and function cooperatively within an organized program. Observation indicates, however, that there is a relatively wide range of ability within this group of children which would appear to require considerable differentiation on the part of the teacher with respect to the classroom demands placed on the children. There was often inadequate planning of classroom activities for the accommodation of the wide range of abilities of the children in this study. Where all the children were required to perform the same task, the brighter children were through considerably earlier than the other children and generally were not provided with additional activities. In some instances, the teachers selected a few of the more capable children for instruction leaving the remaining children without planned activity.

The discrepancy between the teachers' stated goals and the implementation of procedures to attain these goals is striking because the teachers appeared to have considerable latitude in the determination of the content and procedures for their class programs. In no case did the teachers indicate that they were prevented from carrying out the school program as they conceived it, or that the administration imposed a program that differed from their conception of the curriculum.

Although curriculum guides, which contain fairly detailed descriptions of behavioral changes expected of trainable children, are available to teachers, the programs observed in this study did not reflect a considered analysis of these guides. The teachers attribute their problems in planning an effective curriculum to three factors: First, although virtually all of the teachers held a standard teaching credential for the mentally retarded, two-thirds of them felt that they had been inadequately prepared for teaching the trainable mentally retarded. They indicated that college instructors, because of their lack of experience with the trainable child, do not provide adequate teacher education programs. Further, the primary focus of teacher education programs is on the educable child and only peripherally on the trainable child. Second, the teachers indicated that the amount of supervisory time alloted to their programs was insufficient, with the exception of those instances in which a full time principal was assigned. Further, the teachers felt that supervisors have had insufficient experience with trainable children. Third, a major difficulty for teachers in determining the effectiveness of school programs for trainable children is the lack of appropriate evaluational procedures and devices for assessing the children's progress.

The over-all impression is that the programs for trainable children are peripheral to the general educational program conducted by the districts. This was substantiated by the teachers, who stated that there is a need for greater understanding of the objectives of the school programs for trainable retarded children on the part of the school administration and teachers other than those in the special programs. This lack of understanding creates a frame of reference that the teaching of trainable children is such a specialized activity that these teachers have little function in committee assignments and in the general educational planning of the district. The difficulties for teachers of the trainable child to participate in these functions are further increased because, for the most part, their school facilities are segregated, thereby reducing the opportunity for contact with other teachers.

The peripheral status of school programs for trainable mentally retarded children may be due to the fact that the initiation of these programs was primarily the result of parental pressure rather than a "natural" outgrowth of present educational philosophy. Although some public school administrators have supported these programs, the lack of solidarity and purpose among educators at all levels have prevented these programs from attaining the status afforded other educational programs. This has tended to diminish the identification of teachers of trainable children with the general field of education and reduced these teachers' feelings of worth to the profession. Recruitment of capable individuals under these circumstances appears difficult, at best. Had the impetus for the extension of schooling for these children come from educators, many of the difficulties in respect to teacher recruitment, program planning, pupil evaluation and supervision may have been lessened.

II. COMMUNITY AND INSTITUTIONAL FINDINGS

The prediction that trainable mentally retarded children living at home would show greater increments in social competence than would children residing in a state institution was based on the assumption that the individual care and personal involvement of parents with their children would be more beneficial to them, in terms of their social competency development, than the care provided by ward technicians. Further, it was assumed that the environment of the home would be more stimulating than the institutional environment and, therefore, more beneficial to the children's development.

The fact that both the Institutional school and Institutional nonschool groups showed significant decreases in their social competency scores over the two-year study period, whereas the community school and the community nonschool groups showed significant increases, would indicate that the general environmental situation within the institution was not conducive to the development of trainable retarded children. The school within the institution apparently cannot counteract the pervasive lack of stimulation by providing a few hours of training each day.

It is questionable whether the school within the institution can carry out a consistent and systematic program for trainable mentally retarded children, as institutions are presently constituted. Although no formal observational procedures were employed, the general impression of the institutional wards in which the children participating in the study resided was that there was little opportunity for developing social competence. The children, when seen on the wards, were wearing hospital-type smocks, no shoes and no socks, thus minimizing many learning experiences relative to dressing. A review of the items included in the San Francisco Social Competency Scale with one of the institution's administrative staff members indicated that there are a number of social competency skills that cannot be learned on the wards by the children because of restrictive institutional policies or limited environmental opportunities. For example, the children living on the wards involved in this study are permitted to use only spoons for eating, and learning to eat with a fork or cut with a knife is therefore not possible.

There is no basis for believing that the institution participating in this study is unique with respect to its ability to foster the development of trainable mentally retarded children. Tizard (1960) states emphatically that present methods of institutional care have a crippling effect on such children. In summarizing the English studies, he states:

> . . . institutional children are particularly retarded in all aspects of language and speech, and in verbal intelligence, as compared with similar mentally handicapped children who live at home. The older the children the greater becomes the discrepancy between their achievements and abilities and those of comparable children brought up in their own homes. The same is true of their personal independence--that is, of their ability to dress themselves, manage their own meals and toilet, and generally help both themselves and the adults who are responsible for them. Observation shows them also to be extremely backward socially and emotionally; and it is clear that in these and in other ways institutional care today warps and stunts the development of already seriously handicapped children.

The World Health Organization (1954) has pointed out that, too frequently, the state institution is the focal point of professional thinking in regard to advising parents as to the planning for their trainable children. Because, historically, institutional personnel have been seen as the "experts" in mental retardation it may be understandable that family physicians, psychologists and probation and health departments recommend institutionalization. Based on the successful experiences of a very few clinics and community hospitals throughout the United States, there is every reason to believe that professional personnel in the community can attain at least the level of proficiency in mental retardation as that of individuals employed by institutions.

The data of this study supports the point of view that the institution is not as desirable a setting as is an adequate home environment for the development of trainable mentally retarded children. It would appear that the present trend to keep such children at home is desirable despite the varied services available within the institution. There is also evidence to support the premise that a similar investment on the part of communities in providing professional services for trainable children would lead to an increased preference by parents for keeping their children at home. Saenger (1960 pp. 90-91) reports:

> A complete diagnostic work-up had been given to twice as many low grade children who remained at home than to those who were institutionalized. Cases remaining at home had been provided with habit training and speech therapy more than three times as often as those who were committed. Similarly, recreational services had been available to one-quarter of those staying in the community but only a few of the committed cases. It is quite likely, therefore, that the more thorough work-up as well as more frequent special treatment services given to retarded who remained in the community as compared to those who were committed, may have been a factor in keeping low grade retarded at home.

There have been a number of proposals for the extension of the community facilities, such as suggested by Kirk, Karnes and Kirk (1955) and *Tizard (1960), for trainable mentally retarded children who are unable to* remain at home. However, to date little has been done in this regard. The philosophy of most state institutions is commendable. However, the institution should be judged by what it does and not by what it says. It is incumbent upon society to test hypotheses deduced from the philosophical framework as to what the institution should and can do. The philosophy of these agencies is not *prima facie* evidence that *in fact* institutions are desirable places in which to rear mentally retarded children.

III. DISCUSSIONS OF FAMILY FINDINGS

Two major areas in regard to parents of retarded children were explored in this study. The first concern was the comparison of changes in adaptability of parents whose children attended public school classes for trainable retarded with parents whose children did not attend such classes. Secondly, the relationship between parent adaptability and other factors, such as sex and diagnostic classification of the children, were determined.

The prediction that parents of school children would increase in adaptability to a greater degree than would parents of nonschool children was based on the assumption that parental contacts with school personnel would increase their effectiveness in training their retarded children at home. This hypothesis was not supported. An analysis of the data suggests that this may be due to the lack of parent-teacher contacts as well as the inadequacy of those contacts when they occurred.

The degree of parental contact with the school personnel varied considerably among the school districts. In some districts regular parent teacher conferences were conducted; in others, monthly parent group meetings were held; in still others, parental contact was sporadic or non-existent. Many of the teachers participating in the study were aware of deficiencies in the parent-teacher aspects of the school program. In answer to the question, "What kinds of problems do you see in carrying out your teaching plans?" twenty-three percent of the teachers stated that there was no adequate follow-through at home.

Thirty percent of the teachers believed their programs could be improved with increased parent education.

The finding that mother adaptability was related to children's gains in social competence suggests that the constructs measured by the adaptability instruments were appropriate to the parent-retarded child relationship. This finding further suggests that teacher contacts with mothers might well be focused on facilitating the mothers' understanding of their children, helping the mothers conceive of alternative ways of training their children, and, perhaps most important, mobilizing the mothers' interest and involvement in achieving certain prescribed goals for their children. In order to accomplish these ends, teachers need to have a clear conception of the children's abilities and the degree of competence they are capable of achieving. In addition, teachers should have the patience and skill to adequately interpret and communicate this information to the mothers. These skills are necessary for teachers of trainable children because the school curriculum and the home training are both focused on the development of social competence.

Although father adaptability was not related to children's gains in social competence, the time fathers spent with their retarded children was significantly correlated with mother adaptability. Also, when children of fathers who are present in the home were compared with children whose fathers were absent from the home, the former group showed significantly greater gains in social competence. This suggests that the father plays a supportive role in the retarded child's family and teachers should be aware of this role. In addition, the teacher's sensitivity to difficulties within the family and referral to the school social worker or psychologist at the appropriate time may contribute to the child's progress in school. The data suggest that the exploration of a number of areas may prove helpful in understanding the parent-retarded child relationship. There has been little research focused on parents of retarded children, particularly as related to the role of fathers in the family.

The fact that mothers scored significantly higher on adaptability than fathers, and that the variables related to adaptability differed for mothers and fathers, suggest that parental roles and expectations differ for mothers and fathers of trainable children. Mother adaptability was found to be associated with ability factors which are intrinsic to the parent-child relationship (i.e., children's I.Q. and social competence). Father adaptability, on the other hand, was related to nonability factors (i.e., children's sex and diagnostic classification) which suggested that fathers' expectations for their retarded children were influenced more by socially determined factors than by the individual child's abilities. These findings tend to offer empirical support for the Parsons-Bales (1955) theory of the mother's role as expressive and particularistic and the father's role as instrumental and universalistic.

The question arises as to whether the differences found between mothers and fathers of trainable children were unique to these parents or characteristic of parents in general. A comparison of parents of normal children with parents of retarded children on adaptability might well contribute to an understanding of the extent and nature of the differences which probably exist between parents of retarded children and parents of normal children.

The finding that fathers' adaptability was correlated with socio-economic status suggests that lower class and middle class fathers may perceive their roles in the family differently. One implication of these findings is that the value orientations are different for parents of differing socio-economic groups. Further study could be devoted to assessing the value orientations of parents of various socio-economic, ethnic and religious groups and determining the consequences of these orientations on the development of the retarded child and of his siblings.

In the present investigation no attempt was made to assess the consequences of parent adaptability on the development of normal siblings of retarded children. *Future research in this area may be helpful in* extending the work already undertaken by Farber (1959).

IV. RECOMMENDATIONS

The findings of this study point to the need for improvement in teacher education programs and school programs for trainable mentally retarded children as well as increased research activity. The following recommendations are proposed with a view toward strengthening the over-all services of the schools for trainable mentally retarded children.

A. TEACHER EDUCATION PROGRAMS

Because colleges are responsible for the preparation of teachers of trainable mentally retarded children, the most direct and immediate way of improving the competencies of these teachers is by strengthening the teacher education programs. A prerequisite for an effective teacher education program is the obtaining of college teachers who are trained and experienced with mentally retarded children. The caliber of individuals involved in the education of teachers is vital to the status of the programs for trainable mentally retarded children. The adequacy of the instructors in teacher education programs will determine, to a great extent, the ability of the teachers to develop an effective school program for trainable retarded children. On the other hand, certain personal characteristics are also required on the part of the teachers in order for them to capitalize on the knowledge and skills gained in the teacher training program. Of particular importance is their desire and enthusiasm for teaching trainable children as well as their acceptance of children with severe intellectual limitations. Although it is recognized that many prospective teachers of trainable retarded children have had prior training with "normal" children, these additional characteristics are necessary. A list of specific recommendations in regard to the kind of knowledge and skills a teacher should acquire follows:

1. The teachers of trainable children should be provided with a philosophic rationale for the inclusion of these children in the present educational system.
2. The relative effect of retarded children on parents and siblings should be emphasized. The value orientations

and the parents' perceptions of their roles among differing socio-economic and ethnic groups and their consequences on the development of trainable retarded children should be explored.

3. The course sequences should give adequate time to the understanding and practice of counseling and interview techniques. These should be particularly related to the problems of parents of trainable mentally retarded children in order that teachers can give help with regard to home problems and to the understanding of the development of retarded children.
4. The sequence should include a curriculum and methods course specific to trainable mentally retarded children. The content of this course should emphasize the social competency goals appropriate to the children of various ages included in the public schools.
5. Demonstration-type classes and student teaching opportunities with trainable retarded children, under the supervision of trained and experienced master teachers, should be provided by teacher education institutions.
6. Student teacher seminars should be held to discuss the unique aspects of school programs for trainable children. These seminars should include a comparative analysis of

the learning abilities of and the teaching procedures utilized with educable mentally retarded children.

B. SCHOOL PROGRAMS FOR TRAINABLE RETARDED CHILDREN

Because of the wide variance in the abilities of the children, detailed curriculum planning is required for each child. In order to do this kind of planning the teacher must have considerable information in regard to the children's present level of development, a clear conception of the immediate and long range goals and a basis for evaluating the children's progress toward these goals. Since the educational planning for these children is a continuous process, adequate opportunity must be provided for meetings among all professional personnel as well as with parents. This is particularly important if the effectiveness is to be realistically evaluated.

1. There should be careful screening of children for these programs in order to develop a curriculum so that the children will receive maximum benefit from the training program.
2. The curriculum of the schools should be explicitly geared to the development of social competence and these activities should be realistic in terms of the age, intelligence and general maturity level of the children.
3. There should be adequate provision for the supervision of programs for trainable children. There should be direct participation by the principal, head teacher, coordinator or school psychologist in the planning and evaluation of these programs. Further,

the supervisors should provide leadership in the in-service training of the teachers. The supervision of these programs should be up-graded by providing seminars and workshops at the college level.

4. There should be frequent parent-teacher contacts which include systematic evaluations of the children's development and methods by which the parents and teachers can effect changes in the children's development at home and at school.

C. RESEARCH RECOMMENDATIONS

School programs for trainable mentally retarded children are of recent origin and therefore there are gaps of knowledge regarding the learning abilities of these children. There have been a few studies dealing with the effects of training on these children as well as the effects of such children on their families. From these prior research efforts, and from the data obtained from this study, a number of problems need further exploration:

1. There is a need for instruments that will be useful in assessing the learning potential of trainable mentally retarded children and, in particular, their development in social competence.
2. There should be continuous research in curriculum development with particular emphasis on the study of teaching procedures most conducive to effecting changes in the development of trainable mentally retarded children.

3. Many school facilities for trainable mentally retarded children are not appropriate for the training requirements for these children. Continuous and intensive study in this area is needed.
4. The consequences of parent counseling by teachers on parent adaptability and on the development of social competence of trainable mentally retarded children should be studied.
5. There should be increased research of the effect of trainable retarded children on their families, with a particular effort to include fathers in such research. The adaptability of parents of "normal" children as compared to parents of retarded children should be studied.
6. There should be research on the effect of differing value orientations and the parents' perception of their roles among differing socio-economic and ethnic groups on the development of the trainable mentally retarded child.
7. A thorough analysis of institutional programs and their adequacy in fostering the development of trainable mentally retarded children should be undertaken.

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APPENDICES

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APPENDIX A

SOCIAL COMPETENCE SCALE DEVELOPMENT AND SCALE PROPERTIES

The selection of behaviors for the San Francisco Social Competency Scale came from the following sources: an analysis of all of the major curriculum guides developed for the trainable mentally retarded by public schools and institutions; discussions with professional personnel, all of whom have extensive experience with mentally retarded children; discussions with parents of trainable retarded children, and a careful examination of existing scales and evaluational instruments.

A. ITEM SELECTION CRITERIA

The following criteria were utilized in selecting the items for the social competency scale:

1) High rank-order agreement among judges as to the ordering of the item alternatives along the social competency continuum.

2) Each item is unidimensional as to the social competency continuum as well as to content. The content must be unidimensional in terms of the specific skill and the frame of reference for rating this skill. That is, the manipulative and initiative aspects of the behavior should permit independent ratings.

3) The item permits scaling on at least four levels in order to show increments in social competence over time.

4) The behavioral statements should not include value judgments or reflect a particular cultural orientation.

5) The items should be observable in the home situation and ratable by parents.

6) The items should be equally applicable to both sexes.

The selection of items was based on the general concept of social competence rather than their pertinency to any specific setting, such as a school program or institution.

The unidimensionality criterion was crucial in the selection of all items. A study of the rank-order agreement among teachers of mentally retarded children on scales similar to the one developed corroborated the necessity for this. It was difficult for the teachers to rank-order items on other scales because the behaviors were multi-dimensional. Likewise, the inability to determine the appropriate frame of reference required for rating a child left the meaning of any given rating unclear.

B. DEVELOPMENT AND PRE-TESTING OF SCALE

The items of the first trial form of the scale were divided into four subscales denoting different aspects of social competency. These subscales were: Self Help, Quality, Responsibility and Social Skills. Prior to the first trial form of the social competency scale, the alternatives within each item were rank-order by the staff in terms of the frame of reference of the particular subscales. The alternatives within each item were then randomized. Teachers of trainable retarded children and other professional personnel (psychologists and public school personnel in special education) were then asked to rank-order the item alternatives using the appropriate frame of reference. For each item a tabulation was made of judges' rank-ordering of the alternatives within that item and these rank-orderings were then compared with the a priori rank-ordering of the authors. The percentage of each group of judges agreeing with the a priori rank-ordering was computed.

In general, the criterion for accepting an item was at least 70 percent agreement with the a priori ordering of the project staff. When the judges agreed among themselves to this extent but did not agree with the project staff, the item was re-ordered on the basis of the judges' ordering. Items on which the judges could not agree sufficiently were either rewritten or deleted from the scale. Items retained after this procedure appear in the first trial form of the scale (Form X-1). Form X-1, consisting of 70 items, was distributed to six school districts (N=296) and nine state institutions for the mentally retarded (N=426). Of these, 188 public school and 219 institutional scales were returned satisfactorily completed.

The data were analyzed in terms of:

1. Item alternative increments with mental age and chronological age.
2. Item - Total Score correlat ions.
3. Item - subscale score correlations

On the basis of this analysis, certain items were rewritten or deleted and Form X-2 was prepared. Form X-2, consisting of 60 items, was distributed to 23 public school districts (N=926) and 13 state institutions

(N=845), and to 13 private and parent-operated schools for the mentally retarded (N=454). Of these, 556 public school scales, 472 institutional scales, and 212 private and parent school scales were returned satisfactorily completed. The ratings on this form of the scale were analyzed and on the basis of this analysis Form X-3, the final form of the scale, was developed.

Table A:1 contains the number of items in the various subscales for the two trial forms of the social competency scale.

TABLE A:1

NUMBER OF ITEMS FOR THE VARIOUS SUBSCALES CONSTITUTING THE TWO TRIAL FORMS OF THE SAN FRANCISCO SOCIAL COMPETENCY SCALE

Form X-1		Form X-2	
Subscale	Items	Subscale	Items
Self Help	24	Self Help	27
Quality	8	Initiative-Responsibility	13
Responsibility	17		
Social Skills	21	Social Skills	20
Total	70	Total	60

An analysis of Form X-1 indicated that the items in the Quality subscale correlated so highly with the Self Help subscale that they were revised where necessary and transferred to the latter subscale. The items in the Responsibility subscale appeared to contain an initiative factor and, therefore, this subscale was renamed Initiative-Responsibility in Form X-2.

C. EXPERIMENTAL FORM OF THE SCALE.

The San Francisco Social Competency Scale (Form X-3) contains a total of 72 items and is composed of four subscales; Self Help, Initiative-Responsibility, Social Skills and Communication. Since plans to utilize a communication scale from other sources did not materialize, it was necessary to develop such a scale for Form X-3. For the Communication subscale, the aforementioned rank-order procedure for randomized item alternatives was carried out, and the agreement met the criterion of acceptance.

Each item is composed of either four or five alternative levels. Table A:2 contains the number of items and the range of possible scores for each subscale and the Total Score.

TABLE A:2

NUMBER OF ITEMS AND RANGE OF SCORES FOR THE SUBSCALES AND TOTAL SCORE IN THE SAN FRANCISCO SOCIAL COMPETENCY SCALE (FORM X-3)

	No. of Items	Range of Scores
Self Help	23	23 - 100
Initiative-Responsibility	16	16 - 66
Social Skills	15	15 - 64
Communication	18	18 - 73
Total	72	72 - 303

D. DEFINITION OF SUBSCALES

1) The Self Help subscale is designed to measure the child's

manipulative ability or motor skills. The concern here is solely with manipulation and not whether the child must be directed to do the skill or whether he initiates the activity. The greater the child's manipulative ability, as reflected by his Self Help score, the more socially competent is the child.

2) The Initiative-Responsibility subscale is designed to measure the degree to which the child's behavior is self-directed. The child who must be directed to an activity is defined as being less socially competent than the child who initiates that activity. It is conceivable that two children of equal manipulative ability will differ in the amount of responsibility or in the self-direction they assume.

3) The Social Skills subscale is designed to assess the child's movement toward engaging in interpersonal relationships with other children and adults. The more the child is able to relate to others and to participate in group situations, the more socially competent he is.

4) The Communication subscale is designed to measure the degree to which a child makes himself understood to people in general. The greater the child's adequacy in communicating his wants, the greater his social competence.

E. SCALE PROPERTIES

The scale properties of the San Francisco Social Competency Scale reported in this section are solely for Form X-3, as the study data are based on this form of the scale. These data are for the combined community samples prior to attrition.

Table A:3 presents the correlations of the social competency subscales and Total Score with C.A. and M.A. All of the correlations are significant beyond the .01 level.

TABLE A:3

SOCIAL COMPETENCY SUBSCALE AND TOTAL SCORE CORRELATIONS (PEARSON r) WITH CHRONOLOGICAL AGE AND MENTAL AGE

	C.A. N=161	M.A. N=150
Self Help	.43	.41
Initiative-Responsibility	.27	.28
Social Skills	.22	.41
Communication	.34	.43
Total	.29	.49

The odd-even reliability coefficients for the subscales and the Total Score are presented in Table A:4. The magnitude of these coefficients indicate that there is a high degree of internal consistency within the subscales as well as within the Total Score.

The subscale and Total Score intercorrelations are reported in Table A:5. In order to eliminate spuriousness, the particular subscale being correlated with the Total Score has been removed from the Total Score. Although intercorrelations of the subscales justify their consideration as distinct components of social competence, they are of sufficient magnitude to warrant combining them into a total social competency score.

TABLE A:4

ODD-EVEN RELIABILITY COEFFICIENTS[1]
FOR SOCIAL COMPETENCY SUBSCALES
AND TOTAL SCORE
N=161

Self Help	.90
Initiative-Responsibility	.85
Social Skills	.87
Communication	.93
Total	.90

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[1] Pearson r's corrected by Spearman-Brown Prophecy formula

TABLE A:5

INTERCORRELATIONS (PEARSON r) OF SOCIAL COMPETENCY
SUBSCALES AND TOTAL SCORE
N=161

	Init.-Resp.	Social Skills	Communication	Total
Self Help	.77	.63	.40	.67
Init.-Resp.		.79	.38	.82
Social Skills			.62	.80
Communication				.53

The social competency subscale and Total Score correlations (gamma) with the variables of age and education of the children's parents, the income and occupation of the family's major wage earner and the number of children in the family were all nonsignificant.

Table A:6 presents the item correlation (gamma) with the subscales and Total Score for the community control and experimental groups.

TABLE A:6

ITEM CORRELATIONS (GAMMA) WITH SUB-SCALES AND TOTAL SCORE FOR COMMUNITY CONTROL AND EXPERIMENTAL GROUPS

	Control N=88					Experimental N=73				
	Self Help									
Item	SH	IR	SS	Total	Comm.	SH	IR	SS	Total	Comm.
1.	.65	.30	.30	.49	.24	.36	.19	.16	.29	.01
2.	.67	.49	.42	.61	.30	.55	.28	.27	.46	-.02
3.	.65	.47	.43	.59	.30	.55	.31	.23	.45	-.10
4.	.71	.55	.57	.68	.39	.56	.40	.53	.57	.08
5.	.67	.49	.35	.57	.34	.57	.39	.27	.50	-.07
6.	.59	.36	.36	.51	.31	.64	.53	.30	.59	.13
7.	.73	.56	.44	.66	.47	.52	.27	.34	.45	.14
8.	.56	.48	.35	.53	.29	.54	.47	.37	.55	.16
9.	.67	.59	.44	.65	.35	.47	.48	.48	.53	.17
10.	.77	.54	.44	.68	.38	.57	.42	.24	.47	-.03
11.	.63	.35	.36	.52	.19	.53	.38	-.02	.38	-.16
12.	.83	.69	.47	.75	.30	.49	.34	.20	.39	.22
13.	.73	.45	.29	.55	.25	.71	.48	.39	.64	.09
14.	.59	.50	.57	.62	.44	.48	.46	.33	.48	.13
15.	.70	.55	.46	.66	.34	.50	.31	.25	.41	-.05
16.	.61	.51	.42	.57	.29	.56	.32	.25	.47	.10
17.	.66	.59	.45	.65	.29	.44	.34	.16	.36	.07
18.	.78	.64	.44	.70	.33	.51	.53	.34	.54	.18
19.	.76	.55	.37	.64	.26	.73	.52	.39	.65	.04
20.	.74	.64	.52	.71	.34	.69	.52	.34	.64	.08
21.	.68	.58	.57	.71	.44	.64	.62	.29	.60	.00
22.	.77	.51	.46	.67	.30	.47	.39	.43	.47	.10
23.	.75	.61	.44	.70	.36	.68	.62	.51	.73	.16
	Initiative-Responsibility									
24.	.68	.72	.52	.72	.46	.44	.40	.36	.45	.12
25.	.58	.62	.42	.60	.33	.57	.62	.36	.60	.11
26.	.50	.62	.60	.63	.51	.37	.46	.26	.43	-.01
27.	.42	.64	.50	.54	.31	.34	.51	.27	.41	.04
28.	.45	.63	.52	.57	.48	.47	.57	.40	.56	.11
29.	.47	.63	.45	.57	.37	.37	.56	.35	.47	.02

[1] The Communication sub-scale was not included in the Total Score at the time that these correlations were computed.

TABLE A:6

(Continued)

	Control N=88					Experimental N=73			
					Initiative-Responsibility				
Item	SH	IR	SS	Total	Comm.	SH	IR	SS	Total	Comm.
30.	.37	.58	.61	.56	.50	.29	.36	.20	.31	.22
31.	.39	.70	.51	.58	.35	.38	.53	.55	.52	.15
32.	.26	.57	.50	.46	.38	.25	.33	.38	.36	.18
33.	.55	.71	.52	.64	.42	.38	.50	.42	.47	.17
34.	.61	.67	.53	.67	.39	.22	.47	.34	.36	.05
35.	.45	.63	.43	.55	.29	.31	.46	.12	.30	.01
36.	.60	.62	.48	.63	.31	.54	.53	.39	.56	.32
37.	.42	.71	.51	.59	.35	.33	.50	.33	.43	.23
38.	.50	.76	.73	.71	.48	.28	.55	.46	.45	.07
39.	.28	.54	.52	.47	.34	.43	.54	.41	.52	.22
					Social Skills					
40.	.45	-.32	-.13	-.02	.60	.65	.78	.79	.80	.30
41.	.24	.48	.60	.45	.37	.29	.39	.50	.42	.23
42.	.57	.51	.66	.62	.52	.39	.51	.75	.60	.53
43.	.29	.53	.71	.52	.56	.18	.30	.58	.34	.32
44.	.44	.60	.75	.64	.61	.46	.62	.61	.63	.32
45.	.34	.57	.63	.54	.44	.33	.43	.49	.44	.11
46.	.48	.67	.72	.66	.59	.30	.48	.67	.51	.19
47.	.30	.49	.68	.51	.47	.22	.34	.49	.35	.12
48.	.42	.69	.78	.65	.46	.31	.48	.48	.47	.16
49.	.39	.32	.54	.46	.50	.25	.34	.52	.41	.34
50.	.33	.58	.66	.55	.51	.36	.50	.59	.52	.45
51.	.29	.21	.43	.32	.28	.28	.30	.46	.41	.34
52.	.45	.50	.66	.56	.51	.48	.41	.55	.55	.26
53.	.37	.29	.54	.44	.38	.03	.17	.33	.16	.14
54.	.46	.42	.50	.51	.31	.31	.23	.48	.40	.08
					Communication					
55.	.37	.46	.63	.52	.75	.32	.31	.52	.42	.66
56.	.37	.51	.66	.56	.86	-.01	.10	.17	.06	.65
57.	.53	.48	.47	.56	.61	.30	.30	.45	.40	.56
58.	.42	.45	.51	.50	.82	.06	.13	.27	.15	.74
59.	.27	.31	.31	.31	.72	-.01	.00	.20	.05	.71
60.	.30	.42	.53	.44	.86	.06	.18	.27	.18	.88
61.	.40	.50	.57	.51	.85	.08	.15	.34	.19	.80
62.	.29	.40	.57	.44	.69	.06	.09	.31	.16	.52

TABLE A:6

(Continued)

Control N=88						Experimental N=73				
Communication										
Item	SH	IR	SS	Total	Comm.	SH	IR	SS	Total	Comm.
63.	.43	.49	.44	.50	.60	.09	.13	.27	.16	.53
64.	.42	.49	.57	.552	.75	-.17	-.03	.22	-.02	.43
65.	.39	.54	.61	.54	.77	.11	.06	.23	.14	.80
66.	.37	.26	.33	.35	.67	-.03	-.11	.13	.01	.71
67.	.40	.35	.41	.43	.66	.21	.25	.42	.32	67
68.	.30	.39	.47	.41	.85	.14	.22	.26	.24	.80
69.	.41	.60	.66	.60	.78	.21	.23	.45	.31	.69
70.	.47	.68	.66	.67	.64	.16	.22	.28	.23	.55
71.	.36	.47	.57	.50	.79	.07	.18	.20	.18	.71
72.	.34	.47	.59	.50	.82	.13	.23	.31	.26	.76

APPENDIX B

SAN FRANCISCO SOCIAL COMPETENCY SCALE
FORM X-3

SELF HELP

1. UNDRESSING

1. Cannot undress self.
2. Takes off most clothing but cannot unbutton or unzip.
3. Takes off most clothing and can unbutton and unzip.
4. Completely undresses self.

2. FOOD PREPARATION

1. Cannot prepare simple foods.
2. Can prepare foods not requiring mixing or cooking (e.g., can make sandwiches such as cheese spread, peanut butter).
3. Can prepare foods requiring mixing but not cooking (e.g., cold puddings, cold drinks).
4. Can both mix and cook simple food (e.g., jello, oatmeal).

3. MAKING BED

1. Cannot make or undo bed.
2. Can undo but cannot make bed.
3. Can spread sheets and blankets on bed, but cannot tuck or put pillow in case.
4. Can completely make bed, including tucking and putting pillow in case.

4. OPENING DOOR

1. Cannot open door.
2. Cannot open door requiring turning knob, but can push door open.
3. Can open door when knob turning is required.
4. Can open or lock door with key.

5. EATING

1. Cannot feed self.
2. Can hold utensils but can use only spoon in feeding self.
3. Successfully uses a spoon but sometimes spills with a fork.
4. Feeds self with a fork and spoon without spilling.
5. Can use spoon and fork and cut with knife in eating.

6. SERVING FOOD

1. Cannot carry food without spilling.
2. Can carry only solid foods without spilling.
3. Can carry semi-solid foods without spilling.
4. Can carry a pitcher or glass of liquid without spilling.
5. Can carry and pour liquids without spilling (e.g., milk, juice, coffee).

7. USE OF KNIFE

1. Cannot hold knife.
2. Can hold knife but cannot use.
3. Can spread butter or jam with knife.
4. Can cut soft food such as sausage, hamburger patties, french toast.
5. Can cut up meat if trimmed and removed from bone.

8. BLOWING NOSE

1. Cannot blow nose.
2. Can blow nose but usually needs wiping.
3. Can blow nose but sometimes needs wiping.
4. Can blow nose, including wiping.

9. BRUSHING TEETH

1. Cannot hold toothbrush.
2. Can hold toothbrush but cannot brush teeth.
3. Can hold brush, makes brushing motions, but does not brush properly. Cannot apply paste.
4. Can hold brush, apply paste and get to mouth, but must be aided with actual brushing.
5. Can brush teeth unaided.

10. SWEEPING

1. Cannot sweep floor.
2. Can sweep floor where there are no obstructions; unable to pick up dirt in dustpan.
3. Can sweep under desks or tables but cannot pick up dirt in dustpan.
4. Can sweep under desks or tables and can pick up dirt in dustpan.

11. REMOVING OUTER CLOTHING

1. Cannot take off outer clothing.
2. Can take off outer clothing such as coats and jackets.
3. Can take off outer clothing such as shirts, pull-over sweaters, blouses, shoes, etc.
4. Can remove all outer clothing, including undoing back buttons, belts, etc.

12. CARE OF FINGERNAILS

1. Cannot clean or file fingernails.
2. Can clean nails with better hand but needs help with other hand.
3. Can clean nails on both hands.
4. Can clean and file nails on both hands.

13. DRESSING

1. Cannot put on any clothing.
2. Can put on clothing but cannot button or zip.
3. Can put on most clothing and can button and zip.
4. Dresses completely except for shoe tying and rain shoes.
5. Completely dresses self, including shoe tying and rain shoes.

14. PASSING FOOD

1. Cannot pass food.
2. Can pass bowls with solid food only.
3. Can pass plates with solid food only.
4. Can pass bowls with liquid or semi-liquid food.
5. Can pass all items, including platters and trays with food on them.

15. FOLDING ARTICLES

1. Cannot fold any laundry items.
2. Can fold washcloths, towels and pillow cases with help.
3. Can fold washcloths, towels and pillow cases without help.
4. Can fold washcloths, towels and pillow cases without help and sheets, blankets and bedspreads with help.
5. Can fold all of above items without help.

16. CARE OF SHOES

1. Cannot wipe shoes.
2. Can wipe shoes but cannot brush or polish.
3. Can wipe and brush shoes but cannot polish.
4. Can clean, brush and polish shoes.

17. CLEANING UP

1. When cleaning up spilled liquids he smears over larger area, making a bigger mess.
2. Blots up some liquid, but job must be completed by someone else.
3. Blots up liquid but area requires finishing touches by someone else.
4. Cleans up liquid and does not require someone to finish job.

18. WASHING HANDS AND FACE

1. Although the child goes through the motions of washing hands and face, they must be redone by someone else.
2. After washing hands and face they must be partially redone by someone else.
3. Usually washes hands and face so that they do not need redoing, but child needs to be checked each time.
4. Can wash hands and face without having to be checked.

19. DRESSING

1. Cannot put on any clothing.
2. Usually someone else must partly redo and complete the job (e.g., button correctly, put shoes on proper feet).
3. Adult must check job and frequently adjust clothing.
4. Job must be checked by someone else and necessary adjustments made by the child.
5. Dresses self adequately without having to be checked.

20. DOING TASKS

When child indicates he is through with a task:

1. It must be completely redone by someone else.
2. It must be partly redone by someone else.
3. It is usually done adequately but someone else needs to check on how well it is done.
4. There is no need to check because child adequately carries out task.

21. CLEARING TABLE

1. Cannot clear table of unbreakable dishes.
2. Can clear table of unbreakable dishes and silverware but cannot scrape dishes and stack.
3. Can clear table of breakable dishes, glassware and silverware, but cannot scrape dishes and stack.
4. Can clear table, scrape and stack breakable dishes for washing.

22. PUTTING ON SHOES

1. Cannot put on shoes.
2. Can put on shoes and pull laces tight.
3. Can put on shoes and make first part of the knot.
4. Can put on shoes and tie bow.

23. CLEANING DISHES

1. Cannot stack or scrape dishes.
2. Can stack dishes but cannot scrape.
3. Can stack and scrape but cannot wash dishes.
4. Can wash and dry dishes.

INITIATIVE-RESPONSIBILITY

24. TOILETING

1. Does not wipe self.
2. Sometimes wipes self.
3. Usually wipes self.
4. Nearly always wipes self.

25. KEEPING NOSE CLEAN

1. Does not keep nose clean.
2. Sometimes cleans nose.
3. Usually cleans nose.
4. Nearly always cleans nose.

26. TABLE SETTING

1. Does not place silver, plates, cups, etc. on table.
2. Simply places silver, plates, cups, etc. on table.
3. Simply places items around table, not necessarily where they belong.
4. Places plates, glasses, and utensils in positions he has learned.
5. Places all eating utensils, napkins, salt, pepper, sugar, etc. in positions he has learned.

27. PUTTING TOYS AWAY

1. Puts toys away only when directed to do so.
2. Occasionally puts toys away without being told.
3. Usually puts toys away without being told.
4. Nearly always puts toys away without being told.

28. PASSING FOOD

1. Passes food only when asked but does not ask that food be passed to him.
2. Asks for food to be passed to him but does not pass to others without being told.
3. Asks for food to be passed to him and sometimes passes food to others without being told.
4. Asks for food to be passed to him and usually passes food to others without being told.

29. INITIATING TASKS

When given the responsibility for a task (e.g., table setting, washing dishes, cleaning room), he:

1. Does not initiate task.
2. Seldom initiates task.
3. Sometimes initiates task.
4. Usually initiates task.
5. Nearly always initiates task.

30. REPORTING ACCIDENTS

1. Does not take initiative in reporting accidents (e.g., spilling, breaking).
2. Sometimes takes initiative in reporting accidents.
3. Frequently takes initiative in reporting accidents.
4. Nearly always takes initiative in reporting accidents.

31. WASHING HANDS AND FACE

1. Does not wash hands and face without being told.
2. Sometimes washes hands and face without being told.
3. Usually washes hands and face without being told.
4. Nearly always washes hands and face without being told.

32. PLAYING WITH OTHERS

1. Does not initiate play with others.
2. Occasionally initiates play with others.
3. Frequently initiates play with others.
4. Nearly always initiates play with others.

33. BRUSHING TEETH

1. Brushes teeth only when directed to do so.
2. Sometimes brushes teeth without having to be told.
3. Usually brushes teeth without having to be told.
4. Nearly always brushes teeth without having to be told.

34. HANGING UP CLOTHES

1. Does not hang up clothes without being told.
2. Sometimes hangs up clothes without being told.
3. Usually hangs up clothes without being told.
4. Nearly always hangs up clothes without being told.

35. CLEANING UP SPILLED LIQUIDS

1. Does not clean up after having spilled liquids (e.g., soup, water, paint).
2. Sometimes cleans up spilled liquids.
3. Frequently cleans up spilled liquids.
4. Nearly always cleans up spilled liquids.

36. DRESSING

1. Does not initiate dressing.
2. Sometimes initiates dressing.
3. Frequently initiates dressing.
4. Nearly always initiates dressing.

37. CLEANING UP MESS

1. Does not take initiative in cleaning up own mess.
2. Sometimes takes initiative in cleaning up own mess.
3. Frequently takes initiative in cleaning up own mess.
4. Nearly always takes initiative in cleaning up own mess.

38. OFFERING ASSISTANCE

1. Does not offer assistance to others.
2. Sometimes offers assistance to others.
3. Frequently offers assistance to others.
4. Nearly always offers assistance to others.

39. ANSWERING TELEPHONE

1. Does not take initiative in answering telephone.
2. Sometimes takes initiative in answering telephone.
3. Frequently takes initiative in answering telephone.
4. Nearly always takes initiative in answering telephone.

SOCIAL SKILLS

40. TELLING TIME

1. Cannot tell time.
2. Can tell time to nearest hour.
3. Can tell time to nearest 1/2 hour.
4. Can tell time to nearest quarter hour.
5. Can tell time to nearest five minutes.

41. SHARING

When other children wish to share his favorite toy he:

1. Watches passively or cries.
2. Protests.
3. Shares if both play together with the toy, but otherwise does not share.
4. Shares, sometimes giving permission for others to play separately with the toy.
5. Shares, frequently giving permission for others to play separately with the toy.

42. TRAFFIC SIGNS

1. Does not understand any traffic signals or signs.
2. Understands a few traffic signs which do not require reading.
3. Understands most traffic signs which do not require reading.
4. Understands a few traffic signs which require reading.
5. Understands many traffic signs which require reading.

43. BORROWING-VOLUNTEERING

1. Frequently takes objects when in use by others; does not permit the use of his objects by others.
2. Takes other's objects when not in use; does not permit use of his objects by others.
3. Asks permission to use objects and, when asked, will permit others to use his objects.
4. Asks permission to use objects and volunteers use of his objects to others.

44. ANSWERING DOOR

1. When doorbell rings or there is a knock, child does not answer door.
2. Answers doorbell or knock, does not take message, does not call appropriate person.
3. Answers door and calls appropriate person, but does not take messages.
4. Answers door, calls appropriate person, and, when required, relays simple message such as, "Mr. A was here."

45. JOINING IN PLAY

1. Does not join others in play.
2. Sometimes joins others in play.
3. Frequently joins others in play.
4. Nearly always joins others in play.

46. RESPECTING PROPERTY RIGHTS

1. Takes others' property even though he is told what belongs to him or to others.
2. Asks permission to use others' property, but does not return property to owner when he is through.
3. Asks permission to use others' property and will occasionally return property to owner.
4. Asks permission to use others' property and nearly always will return property to owner.

47. PLAYING WITH OTHERS

1. Usually plays by self.
2. Plays with others but limits play to one or two children.
3. Occasionally plays with a larger group (three or more children).
4. Usually plays with a larger group (three or more children).

48. HELPING OTHERS

1. Never helps other children.
2. Helps another child only when they are playing together.
3. Sometimes stops his own play to help another child.
4. Usually stops his own play to help another child.

49. CARE OF SELF

1. Adult must be with or near child at all times.
2. Child can be left alone in his own room with adult in the house.
3. Child can be left in the house but adult must be close by (e.g., in the yard).
4. Child can be left alone in the house while adult visits neighbor or goes to the store (short period, 20-30 minutes).

50. TELEPHONE

1. Cannot answer telephone.
2. Answers telephone, but unable to take message and/or call appropriate person.
3. Answers telephone, calls appropriate person. Cannot take message.
4. Answers telephone, calls appropriate person and takes message.

51. FREEDOM OF MOVEMENT

1. Does not go out of house or yard alone.
2. Goes out alone in the immediate area of the house.
3. Goes freely on his own block but does not cross any streets.
4. Goes several blocks alone.

52. GOING ON ERRANDS

1. Cannot be sent on errands to other people.
2. Can be sent on errands with note to other people.
3. Can be sent on errands without note if only one object is desired.
4. Can be sent on errands without note if not more than two objects are desired.

53. BEHAVIOR IN PUBLIC

1. Cannot be taken to public places because he cries, becomes restless, or frightened, etc.
2. Can be taken to public places but must be held by the hand or given constant reassurance.
3. Can be taken to public places but sometimes requires reassurance.
4. Can be taken to public places and seldom, if ever, requires reassurance.

54. ATTENDING TASKS

1. Pays attention to task if time does not exceed five minutes.
2. Pays attention to task if time does not exceed ten minutes.
3. Pays attention to task if time does not exceed 15 minutes.
4. Pays attention to task if time does not exceed 20 minutes.
5. Pays attention to task even if time exceeds 20 minutes.

COMMUNICATION

55. DELIVERING MESSAGES

1. Cannot deliver messages by gesture or other means.
2. Can deliver a simple message by gesture only (one thought or action).
3. Can deliver a simple message verbally.
4. Can deliver a more complex message verbally (more than one thought or action).

56. ANSWERING QUESTIONS

When asked a question, he:

1. Does not respond.
2. Responds by nodding, pointing, or other gesture.
3. Responds by combination of gesture and speech, but oral response is limited (e.g., yes, no, etc.).
4. Verbally answers question with complete sentence.

57. RELATING OBJECTS TO ACTION

1. Cannot name objects in pictures or story books.
2. Can name objects and people in pictures but cannot indicate actions.
3. Can relate object to action but unable to connect actions into a story.
4. Can connect actions in a picture to tell a story.

58. INDICATING WANTS

At the table, he:

1. Does not indicate his wants.
2. Indicates his wants by gesture.
3. Indicates his wants by saying, "I want that," etc. (does not name food or object).
4. Indicates his wants by specifically naming food or object (e.g., "Pass the potatoes," or "I want the spoon").

59. REPEATING

1. Cannot repeat sounds or words made by others.
2. Can repeat most sounds made by others.
3. Can repeat most words made by others.
4. Can repeat complete sentences made by others.

60. USE OF LANGUAGE

1. Says no words -- gestures only.
2. Says a few specific words (e.g., water, mother, father). Does not use sentences.
3. Speaks in complete sentences (e.g., "I want a drink," "I want the toy," etc..).
4. Speaks in more complex sentences, connecting a number of actions or statements.

61. SHARING

1. Does not indicate, even by gesture, that he wants someone to share something with him.
2. He indicates only by gesture that he wants someone to share something with him.
3. He indicates by gesture and limited speech but does not name object (i.e., "I want," "Give me.").
4. Indicates that he wants someone to share with him by naming object.
5. Uses complete sentence to express his desire for someone to share with him.

62. SPONTANEOUS SPEECH

1. Rarely speaks spontaneously in group situation, even when question is directed to him.
2. Responds in group situation only if question or command is directed to him.
3. Sometimes speaks spontaneously in a group situation.
4. Usually speaks spontaneously in a group situation.

63. FOLLOWING INSTRUCTIONS

1. Cannot follow familiar instructions.
2. Can carry out one familiar instruction.
3. Can follow new instructions given one at a time, as well as familiar ones.
4. Can follow several new instructions given at the same time, as well as familiar ones.

64. SPEAKING TO ADULTS

1. Does not speak to adult friends or adult visitors.
2. Speaks only to close friends of family.
3. Speaks to adult visitors if he has met them before.
4. Speaks to most adult visitors, even if he has not met them before.

65. INDICATING DISLIKES

1. Cannot indicate dislike by gesture or other means.
2. Can indicate whether he dislikes an object offered him, but is unable to indicate by any means what he wants.
3. Indicates his dissatisfaction with object offered him and can indicate by gesture what he wants.
4. Verbally states his dissatisfaction with object and specifically requests what he wants.

66. CLARITY OF SPEECH

1. Communicates by gesture only.
2. Can speak, but speech is frequently indistinct.
3. Speech is somewhat clear but occasionally indistinct.
4. Speech is generally clear and distinct.

67. IDENTIFICATION

1. Can state first name only.
2. Can state full name.
3. Can state full name and address.
4. Can state name, address and telephone number.

68. GOING PLACES

When he wishes to go someplace:

1. Indicates by gesture only.
2. Indicates by using simple words (e.g., "zoo," "store").
3. Indicates by using short phrases (e.g., "go store," "go zoo").
4. Indicates by using complete sentences.

69. PLAYING WITH OTHERS

1. Does not ask to play with other children.
2. Indicates by gesture his desire to play with other children but does not name people or activity.
3. States his desire to play with other children but does not name people or activity (e.g., "I want to play").
4. States his desire to play with others, naming people and/or activity (e.g., "I want to play ball with John," or "I want to jump rope with Mary").

70. COMMUNICATING UNHAPPINESS

When unhappy, he:

1. Cries or runs away without explaining reason for his unhappiness.
2. Kicks or screams at offending object.
3. Seeks help by crying and searching out an adult, but is unable to explain his unhappiness.
4. Expresses his feeling and the cause of his unhappiness.

71. ANSWERING DOOR

1. Does not gesture or speak, just stands there.
2. Indicates that someone is at door by gesture only.
3. Indicates that someone is at door by gesture and limited speech, (e.g., "Man here").
4. Indicates that someone is at door by using complete sentence.

72. BREAKING OBJECTS

After he has broken something he indicates what has happened by:

1. Crying.
2. Pointing to the broken object.
3. Saying, "I broke it," or, "Something broke," etc. (does not name object).
4. Saying, "I broke the train," or, "I broke the glass," etc. (names object).

APPENDIX C

PARENT ADAPTABILITY SCALE DEVELOPMENT AND SCALE PROPERTIES

In order to differentiate between low and high adaptable parents, the parent was presented with problematic child rearing situations. For this purpose an interview schedule was devised to elicit parental responses which would permit obtaining a measure of flexibility, empathy and motivation separately. The respondent was presented with a problematic parent-child situation and then asked specific questions regarding the situation. The parent's responses to the open-ended questions are then rated in terms of the three components of adaptability. Since it is difficult to predict which situations will be perceived as problematic to a particular parent, it was necessary to obtain an adequate sample of such situations.

The literature was reviewed, existing scales and schedules were analyzed and project staff discussions were held. From these sources a pool of 43 common, yet problematic, situations of parent-retarded child relationship were identified.

There were three principal criteria for the inclusion of a question in the interview schedule: the question must elicit responses pertinent to the constructs of flexibility, empathy or motivation; the situation must be seen as problematical to a sufficient number of parents and the responses must permit differentiation among the parents along each of the continua.

Five revisions of the interview schedule were made, based on 60 pre-experimental interviews. The final schedule contained 43 questions covering 24 different situations with the empathy and flexibility components having 15 questions each, and the motivation component having 13 questions.

A. DEFINITIONS OF ADAPTABILITY COMPONENTS

1. Flexibility: Flexibility is defined both in attitudinal and behavioral terms. It represents an attitude which individualizes the child in the light of a specific situation, as opposed to stereotyping both the child's behavior and the situation. In addition, flexibility represents the ability to employ alternative means of action toward the child in the light of the parents' evaluation of the situation, as opposed to acting in a rigid, stereotyped manner. This continuum involves more than the use of alternative modes of actions in dealing with a situation; it also includes the evaluation of these actions and the integration of attitudes with stated actions.

The lower end of the flexibility continuum is characterized by absolute and arbitrary behavior; the higher responses indicate an ability to evaluate and choose between alternative actions. A response rated as low flexibility would be one which stereotypes the child in the situation and employs stereotypic statements to rationalize the action or lack of action taken. Thus, a statement such as, "retarded children need to be loved, so what we do is love him" would be rated low. The mid-point of the flexibility continuum is characterized by a single behavioral response to the specific situation. For example, "If he interrupts when I talk with my husband I'll say, 'I'm talking now, wait until I finish.'" A response rated as high flexibility is one which chooses a specific behavior from a number of alternatives, the behavioral choice being dependent on the parent's evaluation of the situation. For example, "I find if you show him how to do it by taking his hand and doing it with him, from then on he knows what to do. It's much easier than telling him because it's hard for him to understand."

2. Empathy: Empathy is defined as the parent's ability to interpret his child's behavior in terms of feelings, thoughts and motives and to relate this understanding to the specific situation in which the parent and the child are involved. The lowest level of the empathy continuum *is represented by an inability on the part of the parent to explain why the* child behaves as he does in a given situation. The mid-point is indicated by the parent's statement of a simple cause and effect between the child's behavior and the stimulus which elicited the behavior. The highest level of empathy is evidenced by an understanding of the child's feelings, thoughts and motivations and combining this understanding with the stimulus situation which explains the child's behavior.

Empathy has variously been defined as "a gift of understanding people," Allport (1954); "social sensitivity," Lindzey and Borgatta (1954); and "the ability to take the role of the other," an ability which Sarbin (1954) subsumes under what he calls an "as if" skill. The interpretation of empathy employed in this study adheres to these general definitions. It differs, however, from the usage given to it by Dymond (1949), Notcutt and Silva (1951), and others, in that no stipulation was made as to the accuracy of perception. An attempt to assess perceptual accuracy would involve delimiting the situational cues a parent may have to just those areas in which the investigator has factual information. Such a procedure would be a digression from a problem solving orientation.

Bruner and Taguiri (1954) have pointed out, perception of emotions requires as many cues as possible, as well as an understanding of the situational context in which the perceived behavior occurs. A problem solving orientation requires an estimate of the depth of the parent's perception of the child, within the context of a situation. The assumption is that a parent who can interpret the pertinent situational factors relevant to the child's feelings, thoughts and motives evidences sufficient sensitivity to infer a high degree of empathy. In effect, he has the ability to assume the role of the child.

3. Motivation: The term motivation has perhaps the widest range of interpretation and the least amount of constitutive meaning of any of the components. Its breadth and complexity are alluded to by Murphy (1954), "Any serious conception of social motivation must be theoretically complex enough to provide raw material for the manifold subtle components in the motive potential of mankind, must see how the growth and learning

processes may complicate and interweave these expressions, and how the different types of cultural arrangements may mold, stabilize and integrate the various fusion and complications of individual experience" (p. 613). Murphy's statement illustrates the theoretical and communicative problems encountered from utilizing the construct of motivation. What is necessary is to specify the kind of motivation that is of interest. The concern here is not with basic or genetic drives, but rather with a particular form of derived social motive; specifically, the motivation of the parent to solve interpersonal problems with his child. Motivation represents the degree to which the parent gives of his time and energy in order to achieve certain results.

Motivation is defined as an affectual investment characterized by involvement of the parent in influencing certain anticipated goals for the child. The motivation continuum has as its lowest level an unwillingness on the part of the parent to recognize any responsibility for the child or the situation. For example, "There is nothing you can do with him." The mid-point of the continuum is represented by a willingness on the part of the parent to stay with the situation over a period of time. For example, "I always talk to her and warn her against going out in the street." The upper extreme of the motivation continuum is evidenced by persistent follow-through with the child as well as the inclusion of external resources. For example, "I went to school and watched the teacher work with him. She's calm but firm and she expects him to sit quietly and eat, so I expect better behavior from him at the dinner table. If he doesn't behave, he must leave the table. He'll object, but I insist."

As Table C:1 illustrates, each of these components shares in common the underlying continua of generality - specificity and unguided - cognitively guided behavior, which were mentioned in the discussion of the more global concept, adaptability.

TABLE C:1

CRITERIA FOR HIGH, MIDDLE AND LOW LEVELS OF ADAPTABILITY COMPONENTS AND THE UNDERLYING CONTINUA FOR ALL COMPONENTS

	Adaptability Components		
	Motivation	Empathy	Flexibility
Low	No acknowledgment of responsibility for personal involvement.	No recognition or thoughts about causation of child's behavior.	Rigid and stereotyped attitudes and actions.
Middle	Staying with a situation by a particular type of action.	Making a simple and single connection between cause and effect of children's behavior.	Use of a specific or limited act or applied formula.
High	Integration of parent's efforts with outside resources; interpersonal interaction with child with persistent follow-through.	Understanding of the child's feelings, motivations and thoughts as well as the situational factors which resulted in behavior.	Dealing with the situation in terms of its specific meaning, while employing past experience and recognizing changes in the child.

UNDERLYING CONTINUA FOR ALL COMPONENTS

	Generality-Specificity	Cognition* Continuum
Low	Categorical or general response	"Unguided behavior"
Middle	Limited specificity	"Simple guided behavior"
High	High specificity	"Cognitive guidance"

* Based on Baldwin (1958)

B. INTERVIEW PROCEDURE

The interview was designed to be as natural as possible, while maintaining a standardized procedure. Interviewers were given fairly extensive training in the use of the schedule. The training procedure included listening to previous tape recorded interviews and being observed in the interview situation by a member of the project staff. The schedule was adhered to rather rigidly and interviewers were allowed to probe only under the following specified conditions:

(1) When the question was not understood by the respondent, it could be reworded.

(2) The respondent's attention could be redirected to a question if it were avoided or not answered.

(3) The interviewer could reword a question or probe for clarification if he felt the response would not be understood.

(4) When the respondent stated that the situation in the question did not occur, the interviewer could probe to assure himself that the parent was not merely avoiding answering the question.

The interviewer introduces a situation as follows: "I'd like to talk with you now about Johnnie's behavior at the dinner table." After asking a general question about the parent's impression of Johnnie's table manners, the flexibility question is asked in this way: "How do you go about training Johnnie in table manners?" This may be followed by the further probe, "Is this what you always do?" Then the empathy response is elicited by asking, "Why do you think Johnnie behaves (as parent has previously stated) at the dinner table?" Motivation responses are elicited by asking a question in order to obtain the parent's level of aspiration for the child in the given situation. The parent's response is then followed up by two questions designed to tap the amount of involvement evident in achieving these goals for the child. An example of these questions are: "What would you hope for (or like) in regard to Johnnie's behavior at the dinner table?", "What do you think can be done to help achieve this?" and, if necessary, "What have you done in this regard?"

C. MEASUREMENT OF PARENT ADAPTABILITY

In order to determine the degree to which a particular question differentiated among parents, it was necessary to develop criteria against which a response could be rated in terms of flexibility, empathy or motivation. The criteria for each of these components were comprised of a number of levels along the continua of generality-specificity and unguided-cognitively guided behavior. The levels for each of the components were initially determined on an a priori basis.

Using these levels, the pre-test interview data were analyzed. This served three purposes; to determine whether a) the questions differentiated among parents, b) the definition of the levels adequately covered the continua and c) the levels were sufficiently operational to permit reliable ratings. Six criterion levels were established for each of the components of adaptability (see Appendix D).

Verbatim transcriptions were made from the tape recorded interviews and each response for a subject was entered on a separate slip of paper. Each subject was assigned a code number which was the only identifying mark for that subject's responses. This method was followed in order to eliminate halo effect in judging. Responses were then grouped according to question number and component. Two judges made independent ratings for every response. In those instances where the judges did not agree, an average rating was assigned to the response. Judges rated approximately fifty responses at a time and in no instance did a particular pair of judge s rate all responses for a subject. The inter-judge reliability of the independent ratings are presented in Table C:2 for a random sample of responses to the initial interview.

TABLE C:2

INTER-JUDGE CORRELATIONS (GAMMA) OF PRE-TEST RATINGS FOR COMPONENTS

Judge Pairs	Empathy	Motivation	Flexibility
A-B	.99	.99	.99
C-D	.99	.98	.81
E-F	.75	.96	.84
G-H	.90	.60	-
I-J	.83	.66	-
I-K	-	-	.79

Judges A and B were the most experienced raters, having participated in the pre-experimental phase of the project. The low correlations of Judges G and H, and Judges I and J on the Motivation subscale appear to be due to interpersonal difficulties, rather than greater ambiguity in this particular subscale. One member of set G and H took strong exception to the entire rating scheme, as well as the conceptual framework upon which it was developed. In set I and J, personal disagreement between the two judges resulted in one of them withdrawing from any further participation. Neither group of judges contributed appreciably to the total number of ratings. Judges G and H did 10% of the Motivation ratings, while I and J completed only 6%. Judges G, H and J did not participate in making Flexibility ratings.

These data generally support the contention that the process for rating parent adaptability is sufficiently reliable for research purposes.

D. PARENT ADAPTABILITY SCALE PROPERTIES

1. Odd-Even Reliability

The odd-even correlations for each component and for the Total Adaptability Scores are presented in Table C:3 for mothers and fathers. The correlations for the Total Score is .84 for mothers and .81 for fathers. The magnitude of these coefficients indicates that there is a sufficiently high degree of internal consistency to warrant the use of this scale for experimental purposes.

TABLE C:3

ODD-EVEN RELIABILITY COEFFICIENTS[1] FOR ADAPTABILITY COMPONENTS

	Mother N=113	Father N=100
Empathy	.73	.67
Motivation	.77	.68
Flexibility	.68	.81
Adaptability	.84	.81

---

[1] Pearson r's corrected by the Spearman-Brown Prophecy formula.

2. Component and Total Score Intercorrelations

The component and Total Score intercorrelations are reported in Table C:4. Although the intercorrelations justify their consideration as distinct adaptability components, they are of sufficient magnitude to warrant combining them into a Total Adaptability Score.

The correlations of each of the questions with their own component score and with the Total Score are presented in Table C:5. The results indicate greater consistency for mothers than for fathers. However, with few exceptions, each of the questions appears to be contributing reasonably well to the component and Total Scores.

TABLE C:4a

INTERCORRELATIONS (GAMMA) OF ADAPTABILITY COMPONENTS AND TOTAL SCORE FOR MOTHERS

N=113

	Motivation	Flexibility	Adaptability
Empathy	.48	.49	.72
Motivation	-	.48	.75
Flexibility	-	-	.75

TABLE C:4b

INTERCORRELATIONS (GAMMA) OF ADAPTABILITY COMPONENTS AND TOTAL SCORE FOR FATHERS

N=100

	Motivation	Flexibility	Adaptability
Empathy	.35	.31	.71
Motivation	-	.32	.70
Flexibility	-	-	.58

TABLE C:5

ITEM[1] CORRELATIONS (GAMMA) WITH COMPONENT AND TOTAL SCORE FOR MOTHERS AND FATHER SAMPLES

Flexibility Items

	Mother N=113				Father N=100			
Item	Flex.	Emp.	Mot.	Adapt.	Flex.	Emp.	Mot.	Adapt.
2	.53	.42	.36	.51	.53	.27	.21	.42
3	.52	.37	.40	.51	.41	.48	.26	.30
4	.46	.29	.28	.41	.55	.26	.29	.42
5	.37	.24	.25	.33	.19	.03	.09	.09
7	.58	.26	.34	.45	.55	.29	.19	.38
8	.59	.32	.38	.50	.50	.34	.21	.47
9	.36	.24	.20	.30	.48	.21	.14	.32
10	.63	.45	.38	.54	.48	.25	.22	.36
11	.48	.38	.37	.48	.37	.09	.25	.24
13	.55	.32	.31	.45	.52	.27	.35	.46
16	.61	.31	.40	.50	.25	.16	.16	.22
17	.38	.27	.13	.30	.40	.05	.13	.22
18	.41	.23	.11	.31	.30	.20	.39	.34
19	.27	.04	.08	.16	.33	.23	.30	.33
20	.42	.34	.34	.42	.48	.06	.19	.26

Empathy Items

	Mother N=113				Father N=100			
Item	Emp.	Mot.	Flex.	Adapt.	Emp.	Mot.	Flex.	Adapt.
2	.32	.15	.21	.27	.26	-.004	.20	.18
3	.21	.18	.17	.21	.28	.27	.23	.32
4	.26	.06	.16	.20	.32	.02	.08	.16
5	.46	.22	.25	.35	.35	-.06	-.05	.00
7	.34	.28	.29	.36	.39	.13	.18	.30
9	.40	.19	.16	.29	.46	.21	.27	.40
10	.34	.05	.31	.24	.28	-.05	.07	.16
11	.48	.24	.38	.42	.39	.23	.04	.31
12	.42	.39	.28	.42	.42	.23	.23	.39
13	.46	.36	.40	.46	.36	.50	.20	.47
16	.46	.28	.20	.35	.49	.36	.26	.52
17	.47	.27	.23	.38	.40	.10	.02	.27
18	.46	.35	.18	.37	.55	.37	.24	.54
19	.43	.22	.34	.38	.56	.23	.24	.49
20	.49	.29	.37	.45	.47	.30	.30	.47

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[1] Item refers to Question on Parent Adaptability Schedule (See Appendix E).

TABLE C:5

(Continued)

	Mother N=113				Father N=100			
	Motivation Items							
Item	Mot.	Emp.	Flex.	Adapt.	Mot.	Emp.	Flex.	Adapt.
6	.31	.20	.32	.32	.45	.30	.18	.43
9	.44	.30	.28	.39	.58	.25	.10	.42
11	.50	.32	.34	.48	.42	.12	.14	.26
14	.35	.22	.26	.31	.41	.25	.32	.41
15	.37	.34	.30	.40	.34	.21	.03	.26
17	.53	.16	.36	.39	.43	.26	.22	.39
20	.35	.30	.24	.35	.49	.25	.25	.41
21	.43	.32	.35	.44	.48	.30	.20	.47
22	.48	.22	.20	.36	.43	.24	.31	.37
23	.48	.33	.36	.44	.34	.25	.08	.29
24	.44	.24	.25	.38	.33	.17	.18	.24
25	.51	.25	.23	.40	.41	.45	.28	.37
26	.16	.27	.42	.20	.37	.11	.23	.27

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APPENDIX D

CRITERIA FOR RATING COMPONENTS OF ADAPTABILITY

A. Motivation Criteria

Motivation is defined as an affectual investment characterized by involvement of the parent in affecting certain anticipated goals on the part of the child.

Six categories from Low to High

1. An unwillingness on the part of parent to acknowledge any responsibility for personal involvement with the child or in the situation.

2. a) Recognition of the necessity for taking action, but placing responsibility elsewhere or acknowledging an unwillingness to take such action.

b) An expression of interest or concern for the child, but indicating a limited investment of parent's time and energy.

c) A generalized statement which implies by its lack of specificity a minimal amount of involvement.

3. a) A willingness to stay with a situation over a period of time by means of a particular type of action.

b) An effort to look for outside resources.

4. a) A willingness to try out methods suggested by others.

b) An effort on the part of the parent to evaluate his personal responses, but lacking any indication of a corresponding change in action toward the child.

c) An effort on the part of the parent to evaluate his personal responses, which results in indecision or ambivalence as to what action he should take.

5. a) An effort on the part of the parent to evaluate his personal responses and to strive for continual change (self-discipline).

b) An awareness on the part of the parent of continued and ongoing demands, and willingness to undertake the responsibility implied by these demands.

A. Motivation Criteria (Continued)

6. a) The integration of the parent's efforts with outside resources.

   b) An expression on the part of the parent indicating his willingness to become involved with the child in interpersonal interaction which involves persistent follow-through.

B. Empathy Criteria

Empathy is defined as the parent's ability to interpret his child's behavior in terms of the child's feelings, thoughts, and motivations, and to relate this understanding to the particular situation and the child's behavior.

Six Categories from Low to High

1. Does not describe in empathic terms the child's behavior.
2. A limited ability to describe the child's reaction, which is restricted to a single generalized statement.
3. An ability to make a simple or single connection between a child's activity or response and the stimulus for the child's reactions (activity or stimulus).
4. An ability to discern a causal relationship between a child's feelings or motivations or thoughts relative to a particular situation.
5. A comparatively inclusive statement pertaining to a child's feelings, motivations, thoughts and the causative relations, but leaving the impression that the understanding is incomplete or to some degree unsatisfactory or qualified.
6. An inclusive statement pertaining to a child's feelings, motivations, thoughts, and the causative relations for the child's behavior, leaving the impression of sensitive and assured understanding of what the child may be experiencing and reacting to.

C. Flexibility Criteria

Flexibility is defined in both cognitive and behavioral terms. It represents an evaluation which individualizes the child in the light of a specific situation, as opposed to stereotyping both the child's behavior and the situation. It also represents the ability to express and employ alternative means of action toward one's child in the light of the parent's evaluation of the specific parent-child situation, as opposed to acting in a stereotyped manner.

Six Categories from Low to High

1. a) A rigid and stereotyped attitude and action toward a particular situation in which the child is involved, and a persistent, unchanging and perseverative way of behaving in the face of such situations (as distinguished from consistent behavior based on experience).

   b) An attitude which generalizes an abrogation of responsibility.

2. a) An ability to specify a situation while responding in a vascillating, inconsistent or stereotyped manner.

   b) A generalized statement acknowledging the need for some forms of action but indicating an inability or lack of readiness for taking the required action.

3. a) Responding to a prescribed formula from an outside source, and characterized by unquestioning application of that formula.

   b) Recognition of the general situation but employing a specific or limited action.

4. a) Sequence of general actions characterized by goal-directed behavior.

   b) A generalized ability to consider alternative situations and to respond accordingly. This response is more characteristic of the application of a determined formula than a specific response to a particular situation.

   c) An ability on the part of the parent to change patterns of action over time but not to deal with the situation in a specific particularized manner.

5. a) An ability to test or experiment with different techniques, not necessarily arriving at effective means, but including the ability to explain the reason for the alternative actions taken.

C. Flexibility Criteria (Continued)

5. b) An ability to deal with the situation in terms of its specific meaning at the time, comparing this action with alternative situations but in less than a completely satisfactory or conclusive manner.

   c) An ability to recognize changing patterns in the child and plan the necessary parental change.

6. a) A response that is clearly related to the parent's perception of the situation and dependent upon a specific evaluation of that situation, as differentiated from a generalized way of behaving.

   b) An ability to deal with the situation in terms of a specific meaning while relating one's action to past experience.

   c) An ability to recognize changing patterns in the child and make the necessary parental change.

APPENDIX E

PARENT ADAPTABILITY INTERVIEW SCHEDULE

I. 1. What do you think is X's main difficulty?
  a) What have you been told (by doctors, psychologists, etc.) about X's condition?

II. Now I would like to talk with you about X's behavior at the dinner table.

2. What are X's table manners like?
  F[1] a) How do (did) you go about teaching him table manners?
  b) Do (have) you always used the same methods for training X or does (has) this ever change (d)?

  E a) Why do you think X's table manners are so (good, or bad, or whatever parent indicates that he thinks of them)?

3. F a) When X spills food or liquids at the dinner table what is your reaction?
  b) Can you remember a particular time when this happened?
  c) What did you do then?
  d) Do you find it best to always respond in the same way, or do you ever change what you do or say to X?

  E a) Why do you think X spilled on that occasion?

4. F a) When X refuses to eat a particular kind of food, how do you respond?
  b) Can you remember the last time this happened?
  c) (If not answered) Do you (mention previous response) then?
  d) Do you ever deal with this situation differently?

  E a) Why do you think X refused to eat (particular food)?

5. F a) What is your reaction when your child dawdies (wastes time, plays with his food, doesn't eat, etc.) at the dinner table?

---

[1] F=Flexibility, E=Empathy, M=Motivation

5. F b) Can you give me an example of this?
c) Are there any other ways that you have tried to deal with this?

E a) Why do you think X dawdles when he does?

6. M a) How would you like X to behave when he is at the dinner table?
b) What do you think you can do to bring this about?
c) What have you done?

III. I would like to change the subject now and talk about times when X is unhappy or angry.

7. Can you tell me about a time when X reacted by crying, objecting or being angry at something you or your wife (husband) said or did?

F a) What did you say or do then?
b) Is this what you always do when X "acts up"?
c) (If answer is no, or not always) What other ways do you use?

E a) Why do you think X reacts the way he does on such occasions?
b) (If answer is he's mad or unhappy) Why do you think he gets (mad, unhappy, etc.)?

8. F a) When X fights with his brother (s) or sister (s) or with a neighbor or visiting child, how do you respond?
b) Do you always react this way? (If no) What other things have you tried?

9. F a) What is your reaction when X has a temper tantrum?
b) Do you always respond to these tantrums the same way or does this vary?

E a) When does he usually have a tantrum?
b) Why do you think he has tantrums at these times?

M a) How would you like X to behave when he feels like this?
b) Is there anything you can do to bring this about?
c) Are you doing anything new in this regard?

IV. I'd like to talk with you now about what happens when it's X's bedtime.

10. F a) Do you remember how you reacted the last time X refused to go to bed?
b) Do you always respond to this situation in the same way?

E a) Why do you think X reacts this way?

V. I'd like to change the subject now and talk with you about family rules.

11. F a) How do you go about getting X to do what you want?
b) Have you ever tried any other ways of getting X to do what you want him to do?

E a) Why do you think X responds to this the way he does?

M a) How would you like X to react when you ask him to do something for you?
b) Is there anything you think you can do to help bring this about?
c) Have you done anything that you think will help X to behave in this way?

12. E a) How well does X share with other children?
b) Why do you think that this is so?

13. How about when another child (including your own) refuses to share with X?

F a) What did you do?
b) Are there times when you have responded differently? If so, how?

E a) How does X react when this happens to him?
b) Why do you think he reacts this way?

14. M a) Do you feel X could improve in the way he plays with other children?
b) Is there anything you can do to help bring this about?
c) Have you been able to do anything about this?

15. M a) How would you like X to behave when someone else disappoints him or mistreats him?
b) What do you think you can do to help bring this about?
c) What have you done?

16. F a) What is your reactlon when X interrupts you when you are talking with your wife (husband)?
b) Can you remember a particular time when this happened?
c) What did you do that time?
d) In what other ways have you reacted to this situation?

E a) Why do you think it is that X (either interrupts or never interrupts)?

17. M a) How do you want X to behave as far as care of his belongings is concerned?
b) Do you think there is anything you can do to help X behave this way?
c) Is there anything you have done or are doing to bring this about?

F a) When X does not put his toys away what do you do?
b) Is this what you always do? (If no) What else have you done?

E a) Why do you think it is that X (sometimes, always, or never) puts his toys away?

18. F a) What did you do the last time X marked the wall or jumped on the furniture?
b) Have you ever reacted differently to this sort of thing? If so, how?

E a) Why do you think he does this?

19. F a) When X breaks or tears things how do you react?
b) Is this what you always do?
c) (If no) What other things have you done?

E a) Why do you think X behaves this way (when he does)?

20. F a) What do you do when X doesn't mind you?
b) Do you always handle this by (repeat parent's statement)?
c) (If no) What other ways have you tried?

E a) Can you remember a time when this happened?
b) Why do you think X acted (acts) this way?

M a) How would you like X to change as far as minding you is concerned?
b) What do you think you can do to help accomplish this?
c) Are you doing anything at this time that you think will help X in this respect?

VI. 21. How much help does X need in dressing, washing, and generally caring for himself?

M a) What do you hope for as far as X's caring for himself in these ways?

b) Is there anything you can do to help this happen?

c) What have you done in this regard?

22. M a) What sort of things do you hope X will learn in the next few years?

b) What do you think that you can do to bring this about?

c) What have you done in this regard?

23. M a) What do you hope for as far as X's being able to care for himself in the future? (If necessary add:) By that I mean how well he'll be able to get along in the world.

b) What do you think you can do to bring this about?

c) What have you done in this regard?

24. M a) What do you hope for as far as X's learning to express himself (make his wishes and wants known) to people in general?

b) What do you think you can do to bring this about?

c) What have you done?

25. M a) What do you hope for as far as X's ability to make and keep friends?

b) What do you think you can do to help bring this about?

c) What have you done in this regard?

26. M a) Are there any ways that you think X could improve in getting along with adult strangers?

b) What do you think you can do to help bring this about?

c) Is there anything you have done in this regard?

27. Could you tell me what you hope will occur as a result of X's being in a special day class?

a) How do you think X will or will not benefit?

b) Do you think you personally will benefit?

c) What sort of activities do you think should be included in a special day school program?

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APPENDIX F

FAMILY INFORMATION FORM

1. Child's name ____________________

2. Age ____________ Sex _____ Years of schooling Nursery school ___ Public school ___ Parent school ___
   Yrs. Mos.

3. Is child on waiting list for public school __ State Hospital __

4. Name and address of doctor who made diagnosis ________________

5. Child's activities: Time

   Camping ________________

   Playgrounds ______________

   Sunday School ____________

   Specify other _____________

6. Parent's activities: Time

   Parent group ________________

   Church groups _______________

   P.T.A. _____________________

   Specify other ________________

7. Social service agencies contacted: Family service ______________

   Welfare _____ Clinics (specify) ________ Other (specify) _________

   Length of contact ______________ How often contacted __________

   For what reasons ____

8. Wife: Age__Occupation ______ Husband: Age ___ Occupation _____

   Yearly Income___Education____ Yearly Income ____ Education _____

   Relationship to retarded child:
   Natural parent ___
   Step parent ___
   Foster parent ___
   Adoptive ___

   Relationship to retarded child:
   Natural parent ___
   Step parent ___
   Foster parent ___
   Adoptive ___

9. List children in order of birth including retarded child:

	Sex	Age	School Grade		Sex	Age	School Grade
1st born	___	___	__________	4th born	___	___	__________
2nd born	___	___	__________	5th born	___	___	__________
3rd born	___	___	__________	6th born	___	___	__________

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APPENDIX G

SCHOOL INFORMATION FORM

Child's name ____________________ School ______________________

Parents' name ____________________ Address _____________________

Address ________________________ _____________________

________________________ Class ______________________

Telephone ______________________ Teacher _____________________

Child's Sex ___ Age ____________
Yrs. Mos.

Years prior school experience:
- Nursery school __________
- Public school __________
- Parent school __________

Years of institutionalization _________

Parent's Occupation ________________

Intelligence Test ______________ ___________________ CA__MA__IQ__
(Name of test) (Date administered)

Vineland Social Maturity Scale ___ ___________________ CA__MA__IQ__
(Date administered)

Other Test Data ___________ _____________________ ________________
(Name of test) (Date administered) (score, quotient, etc.)

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APPENDIX H

CLASSROOM OBSERVATION SCHEDULE

Teacher: __________
School: __________
Recorder: __________

A. GENERAL PROCEDURES

	Time Period					
	1	2	3	4	5	6
1. Availability of Material a. Material not in room when needed. b. In room. Accessible to teacher only. c. Accessible both to teacher and children.						
2. Was the activity delayed because the material was not immediately available? (Yes or No)						
3. Are there enough instructional supplies for each child? (Yes or No)						
4. Preparation of Material a. No material required. b. No material prepared. c. Minimal preparation. d. Preparation clearly adequate.						
5. Teacher Supervision of Activity a. Engages in other procedures once activity is under way. b. Stays with children but does not concern herself with how they are dealing with their assignments. c. Moves from child to child to check on how each child is faring.						
6. Student Assignments a. No assignments required for this activity. b. No children given assignments. c. Some children are given assignments, and some are not provided with assignments. d. All children are given assignments for carrying out the activity.						
7. Sequential Development of Activity a. No sequence is required. b. All children work on same assignment. c. There is differentiation and a sequential development of activity present so that some children progress to another assignment within the activity.						

A. GENERAL PROCEDURES (Continued)

8. Differentiation of Abilities
   - a. No differentiation of abilities required.
   - b. Individual children are assigned particular levels of the activity in relation to their ability.

9. Encouraging Alternative Suggestions
   - a. Does not encourage alternative suggestions.
   - b. Gives children alternatives and encourages their suggesting a course of action.
   - c. Teacher elicits alternatives from the children and she then selects one of these as a course of action.
   - d. Elicits alternatives and encourages children's selection of one of these as a course of action.

10. Reaction to Student Suggestions
   - a. Teacher is generally led by students' suggestions.
   - b. Teacher ignores suggestions.
   - c. Teacher recognizes but disregards suggestions.
   - d. Teacher recognizes and gives reason for not using the suggestions.
   - e. Recognizes and incorporates suggestions into the activity.

11. Allocation of Responsibility
   - a. No allocation of responsibility required.
   - b. Allocates no responsibility.
   - c. Allocates responsibility to the few most able children.
   - d. Allocates responsibility to as many children as possible.

12. Children Assisting One Another
   Are children encouraged to assist one another? (Yes or No)

13. Social Interaction
   - a. Discourages social interaction during the activity.
   - b. Ignores social interaction unless it interferes with proper functioning of the activity.
   - c. Encourages social interaction.
   - d. Encourages and incorporates the social interaction into the activity.

Time Period

1	2	3	4	5	6

A. GENERAL PROCEDURES (Continued)

Time Period
1 2 3 4 5 6

14. Student Evaluation
    - a. Teacher does not make evaluative statement regarding children's work.
    - b. Teacher makes general, non-specific evaluative statements with the group as the referent.
    - c. Teacher makes non-specific evaluative statements to individual children.
    - d. Teacher makes specific evaluative statements to individual children.
    - e. Teacher involves child in making evaluation of children's work.
15. At the conclusion, has the teacher:
    - a. Summarized the activity by recounting the assignments and indicated further development of the activity? (Yes or No)
    - b. Offered other ways or instances in which the activity or skill might be transferred to another situation? (Yes or No)
    - c. Elicited additional uses from students? (Yes or No)

B. DEALING WITH INDIVIDUAL CHILDREN

16. Dealing with Distracted Child
    - a. Ignores him.
    - b. Does child's work for him.
    - c. Offers verbal encouragement for him to continue with his task.
    - d. Helps him with his work.
    - e. Gives him related alternate task.
    - f. Gives him unrelated alternate task.
    - g. Sanctions his selecting an alternative task related to activity.
    - h. Sanctions his selecting an alternative task not related to activity.
17. Dealing with Deviant Behavior
    - a. Ignores child and the deviant behavior.
    - b. Verbally directs a statement to group, which relates to the deviant behavior, rather than specifically to child who is deviating.
    - c. Uses warm, positive means of involving child in more acceptable behavior.

B. DEALING WITH INDIVIDUAL CHILDREN (Continued)

	Time Period					
	1	2	3	4	5	6
17. Dealing with Deviant Behavior						
d. Verbally directs admonition to the deviating child.						
e. Verbally threatens the child with some punitive action.						
f. Physically restrains the child and threatens punitive action.						
g. Removes child from activity or room.						
18. Child Completing Task Early						
a. Has child wait until the others are finished.						
b. Allows child unstructured play period for the duration of the activity.						
c. Has child repeat his assignment.						
d. Asks child to assist someone else.						
e. Gives child an additional assignment related to the activity.						
f. Allocates a responsibility apart from the activity.						
19. Child Not Completing Assignment						
a. When the activity is completed, all work is terminated.						
b. Tells the child he may finish his assignment at a future time.						
c. Allows child to finish assignment.						
d. Finishes assignment for child.						
e. Allows a more able child to complete assignment of less able child.						
20. Have any children been given assignments independent of the on-going activity, excluding children referred to in Items 16, 17, 18 and 19? (Yes or No)						

APPENDIX I

TEACHER ADAPTABILITY INTERVIEW SCHEDULE

1. F[1] a) When you have organized a group discussion and one or two of the children either continue to talk, make noise or in some way distract the group, what do you do?
   b) Is this what you always do in such a situation? (If answer implies that this varies) What else do you do?
   c) How well does this work? Why do you think it either works or fails?

   E a) Can you think of a specific time this happened?
   b) Why do you think the children involved behaved as they did?

   M a) What would you hope for as far as these children learning to participate in group discussions?
   b) What can you do to help bring this about?
   c) What have you done?

2. F When you plan a group discussion and the group as a whole does not get together and participate
   a) What do you usually do?
   b) Do you find it best to always respond this way or does it vary?
   c) What do you think works best in this kind of situation?
   d) Why do you think it works?

   E a) Can you remember a particular time when this occurred?
   b) Why do you think the group reacted in this way?

   M a) How would you like the group to react when you plan a discussion?
   b) Is there anything you think you can do to help bring this about?
   c) What do you do in this regard?

3. F a) When the group makes fun or laughs at one of the youngsters in the group, what do you do?
   b) Is this what you always do?
   c) (If no) what else do you do?
   d) Why do you think this works (well or poorly)?

   E a) Can you think of a time when this happened in your classroom?
   b) Why did this occur when it did?

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[1] F=Flexibility, E=Empathy, M=Motivation

TEACHER ADAPTABILITY INTERVIEW SCHEDULE
(Continued)

3. M a) How would you like the class to behave when it feels this way? (Scapegoating a child).
   b) What can you do to facilitate this?
   c) What have you done?

4. F a) When the group is engaged in a particular project and one or two of the youngsters refuse to participate (either actively or passively) what do you do?
   b) Is this what you always do?
   c) Why did you use this particular method?

   E a) Can you remember a particular time when this happened?
   b) Why do you think the child (or children) reacted as they did?

   M a) When this child (or children) feel like this, how would you like them to behave?
   b) Is there anything you think you can do to bring this about?
   c) What have you done?

5. E a) How does the group usually react as far as being able to concentrate on a group project?
   b) Why do you think this is so?

   M a) What do you hope for as far as the group's paying attention to a cooperative project?
   b) What can you do to help bring this about?
   c) What have you done?

6. F a) When a child has a temper tantrum in the classroom, how do you react?
   b) Does this ever vary or do you always react the same way?
   c) Does (repeat teacher's response) work?
   d) Why do you think it (works or does not work)?

   E a) Can you tell me about a time when a child had a temper tantrum in your classroom?
   b) Why do you think this occurred?

   M a) When this child feels this way how would you like him to behave?
   b) Is there anything you can do to help bring this about?
   c) What have you done?

TEACHER ADAPTABILITY INTERVIEW SCHEDULE

(Continued)

7. F a) When two children in your classroom get into a fight what do you usually do?
   b) Is this what you always do?
   c) Why do you handle it this way?

   E a) Can you remember a time when this happened?
   b) Why do you think the fight began?

   M a) When two children feel like this (angry, want to fight) how would you like them to behave?
   b) What can you do to bring this about?
   c) What have you done?

8. F a) When you are attempting to hold the group's attention and one youngster interrupts you, what do you do?
   b) Is this what you always do?
   c) How well does this work?
   d) Why do you think that you use this particular method?

   E a) Can you remember a particular time when this happened?
   b) Why did the child interrupt on this occasion?
   c) Are there any other reasons why this particular child interrupts?

   M a) How would you like this particular child to behave when he interrupts?
   b) Is there anything you can do to help him?
   c) What have you done that has helped him in this regard?

9. F a) When the class is working on a project and one of the children refuses to share with another child, what do you do?
   b) Do you ever do anything different?
   c) Why do you think you use this (these) particular method (s)?

   E a) Can you tell me a particular time when this happened?
   b) Why do you think this particular child refused to share?

   M a) What do you hope for as far as this youngster's sharing with others?
   b) What can you do to help him in this regard?

10. F a) When it is time for the class to clean up and they continue to dawdle (play around or waste time) what do you do?
   b) Is this what you always do?
   c) How well does this method work for you?

TEACHER ADAPTABILITY INTERVIEW SCHEDULE

(Continued)

10. E a) Why do you think your class reacts this way on occasion?

M a) How would you like your class to behave when it is clean up time?
b) What can you do to bring this about?
c) What have you done to help bring this about?

11. F a) When a child spills paints or liquids on the work table, what do you usually do?
b) Have you ever responded differently?
c) How well does this usually work?

E a) Can you remember a time when this happened?
b) Why do you think the child spilled on that occasion?

12. F a) When the group is openly defiant (refuses as a group to do what you have asked them to do) how do you react?
b) How well does this work?
c) Have you ever used any other method of dealing with this situation?

E a) Can you remember a time when this happened?
b) Why do you think the class responded as they did?

M a) How would you like the class to behave when it is in this kind of a mood?
b) What can you do to bring this about?
c) What have you done?

13. F a) When you want to start a new activity, how do you go about getting the class to participate?
b) Does this vary, or do you usually use the same method?

E a) How well does the group respond to this method?
b) Why do you think they respond as they do?

14. F a) When a particular child is defiant and refuses to do what you ask him to do, what do you do?
b) Is this what you always do, or does it vary?
c) How well does it work?

E a) Can you remember a particular time when this happened?
b) Why do you think the child behaved as he did on that occasion?

TEACHER ADAPTABILITY INTERVIEW SCHEDULE

(Continued)

15. F a) When a child tears something or breaks a piece of equipment, how do you respond?
    b) Have you ever responded differently?

  E a) The last time one of your pupils behaved in this way, why do you think it occurred?

  M a) When a youngster feels this way, how would you like him to behave?
    b) Is there anything you can do to help this occur?
    c) What have you done that is of help (either to a particular child or to the group) in this regard?

16. F a) When a child withdraws and will not associate with the group, what do you usually do? (i.e., will not play with children on playground)
    b) How well does this method work?
    c) Have you ever handled it differently?

  E a) Does this occur frequently or seldom in your classroom?
    b) Why do you think this (happens or fails to happen)?

17. F a) In a situation where a child is attempting to communicate something to the class and is having a great deal of difficulty making himself clear, what do you do?
    b) Is this what you always do in such a situation?

18. F a) When this happens, how does the class usually react?
    b) What do you do then? (When class reacts in a particular way stated by teacher)

  E a) Why do you think the class reacts the way they do?

  M a) How would you like the class to react under these conditions?
    b) What can you do to bring this about?
    c) What have you done that is helpful?

19. F a) When a child is assigned a task and he doesn't do it as well as you had expected, what do you usually do?
    b) Is this what you always do?
    c) How well does this work?
    d) Why do you think it works as well (or as pporly) as you thought?

TEACHER ADAPTABILITY INTERVIEW SCHEDULE

(Continued)

19. E a) Can you remember a time when this occurred?
b) Why do you think this youngster did not complete his task?

20. F a) When the group is ready and eager to participate in a particular activity and one or two of the children are not mature enough to participate, what do you do?
b) Is this how you always handle this situation?
c) How well does this work?

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